

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

اختبار شهر ابريل



Model Exam 1

Total mark

20

Question 1

5

(A) Choose the correct answer :

(2 marks)

Minerals are the building units of

a. air.

b. plants.

c. water.

d. rocks.

(B) Compare between :

(3 marks)

Points of comparison	Structural adaptation (Physical adaptation)	Behavioral adaptation
Definition :		
Example :		

Question 2

5

(A) Put (✓) or (X) :

(2 marks)

Chrysanthemum plant can produce flowers when the nights are longer than days.

()

(B) Give reasons for :

(3 marks)

1. A birman kitten has a long and silky hair.

.....

2. Soil is very important for plants.

.....

Question 3

5

(A) Complete the following sentence :

(2 marks)

Types of soil differ from each other in and

(B) What happens to...?

(3 marks)

1. Arctic fox, if it has a black fur instead of a white fur.

.....

2. The soil if it doesn't contain any decomposer organisms.

Question 4

5

(A) Cross out the odd word :

(2 marks)

Lizard – Palms – Opuntia – Frog.

(.....)

(B) What is meant by (Define) :

(3 marks)

1. Soil :

2. Adaptation :

Model Exam 2

Total mark

20

Question 1

5

(A) Write the scientific term :

(2 marks)

It contains biotic factors and abiotic factors that interact with each other.

(.....)

(B) Give reasons for :

(3 marks)

1. Birds migrate from one place to another.

2. Some plants that live in desert environment have long roots.

Question 2

5

(A) Choose the correct answer :

(2 marks)

All the following are biotic factors, except

a. animals.

b. insects.

c. precipitation.

d. grasses.

(B) What happens to...?

(3 marks)

1. The plants if the soil becomes unhealthy.

2. The living organisms in an ecosystem, if water and light are not available.

Question 3

5

(A) Put (✓) or (X) :**(2 marks)**

The thick fur of some animals is an example of behavioral adaptation. ()

(B) What is meant by (Define) :**(3 marks)**

1. Humus :

2. Abiotic factors :

Question 4

5

(A) Complete the following sentence :**(2 marks)**

Some plants like and acacia trees live in the environment in Egypt.

(B) What is the importance of soil ?**(3 marks)**

.....
.....
.....

Model Exam 3**Total mark**

20

Question 1

5

(A) Complete the following sentence :**(2 marks)**

The remains of dead plants and animals are decomposed into chemical nutrients such as , nitrogen and

(B) Compare between :**(3 marks)**

Points of comparison	Arctic fox	Lizard
Environment :		
Structural adaptation :		

Question 2

5

(A) Choose from column (B) what suits it in column (A) :**(2 marks)**

(A)	(B)
1. Humus	a. are from the inorganic components of the soil.
2. Air and water	b. help in recycling the nutrients from dead organisms back into the soil.
3. Decomposers	c. is a material that makes the soil fertile and produced from decomposition of organic material of dead organisms.
4. Erosion	d. are the building units of rocks.
	e. is a process that helps in the formation of the soil.

1. 2. 3. 4.

(B) Give reasons for :**(3 marks)**1. African penguin has a circle of skin that doesn't have any feathers around each of its eyes.
.....2. Your lifestyle choices affect your health.
.....**Question 3**

5

(A) Put (✓) or (X) :**(2 marks)**

The intensity and duration of light affect the plant's growth.

()

(B) What happens ...?**(3 marks)**1. If the genetic factor of hairless body trait is transferred from sphynx cats parents to their offspring.
.....2. To two similar plants, if they are exposed to the same intensity and duration of light.
.....**Question 4**

5

(A) Choose the correct answer :**(2 marks)**

Poison dart frog lives in the environment.

a. arctic

b. Antarctic

c. desert

d. tropical rain forest

(B) Classify the following ingredients into organic and inorganic ingredients : (3 marks)

(Air – worms – insects – water – rocks – minerals – remains of dead plants)

Organic ingredients	Inorganic ingredients
.....	
.....	
.....	
.....	

Model Exam 4

Total mark

20



Question 1

5

(A) Choose the correct answer :

(2 marks)

Abiotic factors in an ecosystem include

a. animals and air.

b. grasses and soil.

c. living organisms.

d. nonliving things.

(B) Give reasons for :

(3 marks)

1. Sphynx cat doesn't have long hair.

2. There are many types of soil.

Question 2

5

(A) Complete the following sentence :

(2 marks)

According to the size of particles in the soil, are the biggest particles, while are the smallest particles.

(B) What is meant by (Define) :

(3 marks)

1. Migration :

2. Pore spaces :

Question 3

5

(A) Put (✓) or (X) :

(2 marks)

Soil is considered as shelter to many different living organisms as insects. ()

(B) What happens to...?

(3 marks)

1. The plants in an ecosystem, if they receive too intense light.

2. The soil if the temperature in the environment increases.

Question 4

5

(A) Write the scientific term :

(2 marks)

It is a change in the behaviors or acts of a living organism to help it survive.

()

(B) Mention the function of each of the following :

(3 marks)

1. Big eyes of the poison dart frog :

2. Genes in living organisms :

Model Exam 5

Total mark

20

Question 1

5

(A) Choose the correct answer :

(2 marks)

The material rich in nutrients and increases the soil fertility is known as

a. decomposers. b. humus. c. sand. d. water.

(B) What happens to...?

(3 marks)

1. Arctic fox, if it has a thin fur instead of a thick fur.

2. The rocks if they are affected by the weathering process.

Question 2

5

(A) Cross out the odd word :

(2 marks)

Human – Air – Plants – Animals.

(.....)

(B) Give reasons for :

(3 marks)

1. Decomposers have an important role in the formation of soil.

.....

2. Most of desert plants have short extended roots near the Earth's surface.

.....

Question 3

5

(A) Correct the underlined word :

(2 marks)

Birds migration is considered a structural adaptation.

(.....)

(B) What is meant by (Define) :

(3 marks)

1. Ecosystem :

2. Minerals :

Question 4

5

(A) Complete the following sentence :

(2 marks)

The way of your earlobes hang and the length of your fingers are two traits controlled by that are found in the cell nucleus.

(B) Write three only from the basic needs of living organisms to survive :

(3 marks)

1.

2.

3.

Model Exam 1

- 1 (A) d
(B)

P.O.C.	Structural adaptation (Physical adaptation)	Behavioral adaptation
Definition :	It is the adaptation that is related to the body structure of a living organism to help it survive.	It is a change in the behaviors or acts of a living organism to help it survive.
Example :	Thorns on the stem of some plants.	Migration.

- 2 (A) (✓)

- (B) 1. Because it inherits this trait from its parents.
2. Because soil provides the plants with its basic needs for growth as it contains air, water and nutrients.

- 3 (A) color – texture.

- (B) 1. It can't hide in snow.
2. The soil will lose the chemical nutrients that are found in dead plants and animals, so the soil will not be fertile.

- 4 (A) Frog (All items are found in hot deserts, while frog doesn't live in hot deserts).

- (B) 1. It is the loose layer (delicate skin) which covers Earth's crust.
2. It is the process that helps living organisms to survive in the environment in which they live.

Model Exam 2

- 1 (A) Ecosystem.

- (B) 1. To search for :

- The best conditions that help them reproduce and preserve their species.
- Different food resources.
- Suitable new habitats.

2. To get the deep groundwater.

- 2 (A) c

- (B) 1. The environment will change leading to death of plants that grow in this environment.

2. Living organisms can't survive and will die.

- 3 (A) (x)

- (B) 1. It is an organic material that is rich in nutrients produced from decomposition of dead organisms.
2. They are nonliving things in an ecosystem such as sunlight, air, water, soil, temperature and precipitation.

- 4 (A) palms – desert

- (B) - It is important for the plants that people and animals feed on to survive.
- It provides the plant with its basic needs for growth as soil contains air, water and nutrients.
- It is home to many different living organisms such as : Worms, insects, fungi and bacteria.

Model Exam 3

- 1 (A) carbon – oxygen.
(B)

P.O.C.	Arctic fox	Lizard
Environment :	Arctic environment	Desert environment
Structural adaptation :	It has thick white fur to keep its body warm at low temperatures of weather and hide in snow.	Its body is covered with sandy-colored scales to protect its body from high temperatures of weather and hide among the rocks in desert.

- 2 (A) 1. c 2. a 3. b 4. e
(B) 1. To help its body cool fast in hot climate.
2. Because they depend on your behavior which may be good habits or bad habits.

- 3 (A) (✓)
(B) 1. The trait of hairless body appears on the offspring.
2. The two plants will grow with the same rate.

- 4 (A) d
(B)

Organic ingredients	Inorganic ingredients
– Worms – Insects – Remains of dead plants	– Air – Water – Rocks – Minerals

Model Exam 4

- 1 (A) d
(B) 1. Because it doesn't have the genetic factor for long hair.
2. Due to the different amounts of inorganic and organic ingredients that form them.

- 2 (A) sand – clay
(B) 1. It is considered a behavioral adaptation in which animals move from one place to another seasonally.
2. They are spaces among the particles of the soil filled with water or air.

- 3 (A) (✓)
(B) 1. The too intense light may damage the plant's parts and cause their drying or burning.
2. The soil will dry and may lose its nutrients.

- 4 (A) Behavioral adaptation.
(B) 1. To help it see at night.
2. They carry inherited traits from parents to offspring, so they are responsible for determining the body features.

Model Exam 5

- 1 (A) b
(B) 1. It can't keep its body warm at low temperatures.
2. The rocks are broken down into small pieces such as particles of sand, silt and clay.

2 (A) Air (All items are biotic factors in an ecosystem, while air is an abiotic factor).

- (B) 1. Because decomposers recycle the remains of dead plants and animals into chemical nutrients such as carbon, nitrogen and oxygen which are released into soil.
2. To absorb any available water and catch the smallest drops of dew.

3 (A) behavioral

- (B) 1. It is an area that contains living organisms (biotic factors) and nonliving things (abiotic factors) that interact with each other.
2. They are the building units (blocks) of rocks.

4 (A) inherited – genes

- (B) 1. Food.
2. Water.
3. Habitat.

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

اختبار شهر ابريل



1 A) Correct the underlined word:

- All living organisms get the environmental factors from their parents. (.....)

B) Give a reason for:

- 1 Soil is very important for plants.

•

- 2 Some birds migrate in specific seasons.

•

2 A) Put (✓) or (X):

- Genes are tiny structures that are found in the cytoplasm of cells of living organisms. ()

B) What is meant by ...?

- 1 Humus

•

- 2 Ecosystem

•

3 A) Choose the correct answer:

- All the following are biotic factors, except

a) animals b) insects c) precipitation d) grasses

B) What happens ...?

- 1 To the soil fertility if the soil holds a medium amount of water.

•

- 2 If the plants in an ecosystem receive too intense light.

•

4 A) Write the scientific term:

- The building blocks of rocks.

(.....)

B) Answer the following questions:

- 1 Compare **between** behavioral adaptation and structural adaptation. (In terms of definition and one example of each one).

Points of comparison	Behavioral adaptation	Structural adaptation
.....		
.....		

- 2 What is the importance of the thick white fur of an arctic fox?

• •

1 A) Complete the following sentence:

- Herbivores such as live in savannas.

B) Answer the following questions:

1 Mention two examples of inherited traits in animals.

•

2 Look at the opposite figure, then answer:

Identify the animal in the opposite figure, then mention an example of a structural adaptation that enables it to survive in its environment.



•

2 A) Write the scientific term:

- The loose layer which covers Earth's surface. (.....)

B) Answer the following questions:

1 Decomposers have an important role in keeping balance in an ecosystem. Explain.

•

2 Determine the type of adaptation (structural or behavioral) in this sentence:

- Eagles migrate through the Red Sea region. (.....)

3 A) Cross out the odd word:

- Lizard – Opuntia – Acacia tree – Frog.

B) Give a reason for:

1 Some of the desert plants have thick leaves and stems.

•

2 Different types of soil have different textures.

•

4

A) Put (✓) or (X):

- Chrysanthemum plant can produce flowers when days are shorter than nights. ()

B) Answer the following questions:

- 1 What happens if ...?** A lizard's body is covered with green-colored scales.

•

- 2 Mention** Reasons for bird migration.

•

1

- ## B) What is meant by ...?

1

2

2

- B) Answer the following questions:**

1

- 2

3

- (.....)

1

2

6

4

A) Cross out the odd word:

- Sand – Humus – Clay - Silt.

B) Give a reason for:

- 1 Importance of humus for soil and plants.

•

- 2 The desert lizard body is covered with sandy-colored scales.

•

1 A) Put (✓) or (X):

- Minerals are organic ingredients in the soil. ()

B) Identify the type of factor (genetic – environment – lifestyle):

- Length of hand fingers. (.....)
- Availability of hospitals. (.....)

2 A) Write the scientific term:

- A process that helps living organisms to survive in the environment in which they live. (.....)

B) Answer the following questions:

1 Look at the opposite figure, then choose the correct answer:

- This picture is for and it has long, silky hair due to factor.



- | | |
|----------------------------|-------------------------------|
| a) Pharaonic cat – genetic | b) Berman cat – Environmental |
| c) Sphynx cat – genetic | d) Berman cat - genetic |

2 Compare between: Silt soil and clay soil. (In terms of size of particles).

-

3 A) Correct the underlined word:

- The amount of inorganic materials affect the type of soil. (.....)

B) Give a reason for:

1 Most of desert plants have short extended roots near the Earth's surface.

-

2 Water can flow very fast through sandy soil.

-

4

A) Complete the following sentence:

- The two basic processes in soil formation are and

B) What happens ...?

- 1 If an Arctic fox has black fur instead of white fur.

•

- 2 To the soil if it has large amount of pore spaces between its particles.

•

1 A) Cross out the odd word:

- Wide eye – Plant height – Swimming skill – Skin color

B) Answer the following questions:

- 1 **Mention** challenges that birds face during their migration.

•

- 2 **Complete the table below by using the given words:**

(small – gray – medium – large – dark)

Points of comparison	Clay soil	Silt soil
Color		
Retaining water		

2 A) Complete the following sentence:

- Poison dart frog has to help it see at night.

B) What happens to ...?

- 1 The rocks if they are affected by weathering process.

•

- 2 The plants in an ecosystem, if they receive too intense light.

•

3 A) Choose the correct answer:

- All the following are from organic ingredients of soil, **except**

a) fungi b) dead plants c) water d) bacteria

B) Give a reason for:

- 1 Falcons and eagles migrate to Egypt in winter.

•

- 2 The soil that retains medium amount of water is more fertile.

•

4

A) Put (✓) or (X):

- Some plants that live in deserts have long roots to get the deep groundwater. ()

B) Answer the following questions:

- 1** Decomposers have an important role in the formation of the soil. **Explain.**

•

- 2** **Mention** the different environmental factors that help living organisms to grow.

•

1 A) Correct the underlined word:

- All living organisms get the environmental factors from their parents. (genetic)

B) Give a reason for:

- 1 Soil is very important for plants.
 - Because soil provides plants with nutrients, air, and water.
- 2 Some birds migrate in specific seasons.
 - To breed, find food, or find a suitable climate homeland in this season.

2 A) Put (✓) or (X):

- Genes are tiny structures that are found in the cytoplasm of cells of living organisms. (X)

B) What is meant by ...?

- 1 Humus
 - It is an organic material, rich in nutrients, produced from the decomposition of dead organisms.
- 2 Ecosystem
 - It is an area that contains living organisms and non-living things that interact with each other.

3 A) Choose the correct answer:

- All the following are biotic factors, except
 - a) animals
 - b) insects
 - c) precipitation
 - d) grasses

B) What happens ...?

- 1 To the soil fertility if the soil holds a medium amount of water.
 - The soil keeps its organic materials, so it becomes more fertile.
- 2 If the plants in an ecosystem receive too intense light.
 - The too intense light may damage the plant's parts and cause their drying or burning.

4

A) Write the scientific term:

- The building blocks of rocks.

(Minerals)

B) Answer the following questions:

- 1** Compare **between** behavioral adaptation and structural adaptation. (In terms of definition and one example of each one).

Points of comparison	Behavioral adaptation	Structural adaptation
Definition	It's a change in the behaviors or acts of a living organism to help it survive.	It's the adaptation that is related to the body structure of a living organism to help it survive.
Example	Migration	Thorns on the stem of some plants

- 2** What is the importance of the thick white fur of an arctic fox?

- To keep its body warm in the low temperatures and helps it hide in snow.

1 A) Complete the following sentence:

- Herbivores such as **gazelles** live in savannas.

B) Answer the following questions:

- 1 **Mention two examples** of inherited traits in animals.

- The shape of ear – The fur color.

- 2 **Look at the opposite figure, then answer:**

Identify the animal in the opposite figure, then mention an example of a structural adaptation that enables it to survive in its environment.



- Emperor penguin, it has thick blubber and its skin is covered with dense feathers.

2 A) Write the scientific term:

- The loose layer which covers Earth's surface.

(Soil)

B) Answer the following questions:

- 1 Decomposers have an important role in keeping balance in an ecosystem. **Explain.**

- Because they clean the environment by decomposing the dead organisms and return nutrients back into the ecosystem.

- 2 **Determine** the type of adaptation (structural or behavioral) in this sentence:

- Eagles migrate through the Red Sea region.

(Behavioral adaptation)

3 A) Cross out the odd word:

- Lizard – Opuntia – Acacia tree – **Frog**.

B) Give a reason for:

- 1 Some of the desert plants have thick leaves and stems.

- To store water.

- 2 Different types of soil have different textures.

- Due to the difference in the size of the particles.

4

A) Put (✓) or (X):

- Chrysanthemum plant can produce flowers when days are shorter than nights. (✓)

B) Answer the following questions:

- 1 What happens if ...?** A lizard's body is covered with green-colored scales.
 - It can't hide from its enemies.
- 2 Mention** Reasons for bird migration.
 - 1. The best conditions that help them reproduce and preserve their species.
 - 2. Different food resources.
 - 3. Suitable new habitats.

1 A) Choose the correct answer:

- and are the most common animals that live in bogs.
 - a) Mosquito – frogs
 - b) Lions – tigers
 - c) Gazelles – zebra
 - d) Lions - frogs

B) What is meant by ...?

- 1 Pores
 - They are spaces among the particles of the soil filled with water or air.
- 2 Migration
 - It is considered a behavioral adaptation in which animals move from one place to another seasonally.

2 A) Complete the following sentence:

- **Thorns** on a plant stem protect it from herbivores and this is an example of a **structural** adaptation.

B) Answer the following questions:

- 1 What happens if ...?
 - African penguin has dense feathers around each of its eyes.
 - Its body doesn't cool fast at high temperatures.
- 2 Mention the components of soil.
 - Organic materials (such as dead plant) – living organisms (such as worms and insects) – Water – Air – Sand, gravel, and minerals.

3 A) Correct the underlined word:

- Rocks are broken up into smaller pieces through the process of deposition.
(weathering)

B) Answer the following questions:

- 1 Explain the effect of hot weather on clay soil. (In terms of the flow of water through it).
 - Clay soil dries quickly in hot weather and becomes hard and cracks, so water does not flow through it easily.
- 2 What is the importance of genes?
 - They are responsible for determining all characteristics of a living organism.

4

A) Cross out the odd word:

- Sand – **Humus** – Clay – Silt.

B) Give a reason for:

- 1 Importance of humus for soil and plants.
 - Because humus increases the soil fertility and helps plants to grow.
- 2 The desert lizard body is covered with sandy-colored scales.
 - To protect it from high temperature of weather and hide among the rocks in desert.

1 A) Put (✓) or (X):

- Minerals are organic ingredients in the soil.

(X)

B) Identify the type of factor (genetic – environment – lifestyle):

- 1 Length of hand fingers.

(Genetic factor)

- 2 Availability of hospitals.

(Environmental factor)

2 A) Write the scientific term:

- A process that helps living organisms to survive in the environment in which they live.

(Adaptation)

B) Answer the following questions:

- 1 Look at the opposite figure, then choose the correct answer:

- This picture is for and it has long, silky hair due to factor.



a) Pharaonic cat – genetic

b) Berman cat – Environmental

c) Sphynx cat – genetic

d) Berman cat - genetic

- 2 Compare between: Silt soil and clay soil. (In terms of size of particles).

Point of comparison	Silt soil	Clay soil
Size of particles	Medium	Small

3 A) Correct the underlined word:

- The amount of inorganic materials affect the type of soil.

(organic)

B) Give a reason for:

- 1 Most of desert plants have short extended roots near the Earth's surface.

• To absorb any available water and catch the smallest drops of dew.

- 2 Water can flow very fast through sandy soil.

• Because it has a large amount of pore spaces between its particles.

4 A) Complete the following sentence:

- The two basic processes in soil formation are **weathering** and **erosion**.

B) What happens ...?

- 1** If an Arctic fox has black fur instead of white fur.
 - It can't hide in snow.
- 2** To the soil if it has large amount of pore spaces between its particles.
 - It allows water to flow fast through it.

1 A) Cross out the odd word:

- Wide eye – Plant height – **Swimming skill** – Skin color

B) Answer the following questions:

- 1 **Mention** challenges that birds face during their migration.

- 1- Extreme weather conditions.
- 2- Shortage of food and water.
- 3- Predators.
- 4- Limited resting sites due to habitat loss.

- 2 **Complete the table below by using the given words:**

(small – gray – medium – large – dark)

Points of comparison	Clay soil	Silt soil
Color	Dark	Gray
Retaining water	Large	Medium

2 A) Complete the following sentence:

- Poison dart frog has **big eyes** to help it see at night.

B) What happens to ...?

- 1 The rocks if they are affected by weathering process.
- The rocks are broken down into small pieces such as particles of sand, silt, and clay.
- 2 The plants in an ecosystem, if they receive too intense light.
- The too intense light may damage the plant's parts and cause their drying or burning.

3 A) Choose the correct answer:

- All the following are from organic ingredients of soil, **except**
- a) fungi b) dead plants c) **water** d) bacteria

B) Give a reason for:

- 1 Falcons and eagles migrate to Egypt in winter.
- Because Egypt in winter has moderate climate conditions.
- 2 The soil that retains medium amount of water is more fertile.
- Because it keeps its organic materials and this helps in the plant growth.

4 A) Put (✓) or (X):

- Some plants that live in deserts have long roots to get the deep groundwater. (✓)

B) Answer the following questions:

- 1** Decomposers have an important role in the formation of the soil. **Explain.**
 - Because they recycle the remains of dead plants and animals into chemical nutrients such as carbon, nitrogen, and oxygen which are released into soil.
- 2** **Mention** the different environmental factors that help living organisms to grow.
 - Availability of food, clean water, health care, and habitat size.

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

اختبار شهر ابريل



Revision on Concept 4.1

Adapting to Survive

1 Definitions:

Adaptation	It is the process that helps a living organism to survive in its environment.
Structural (Physical) adaptation	It is the adaptation that is related to the body structure of a living organism to help it survive.
Behavioral adaptation	It is a change in the behaviors (acts) of a living organism to help it survive.
Migration	It is a behavioral adaptation in which animals move together from one place to another, usually seasonally.
Ecosystem	It is an area that contains living organisms and non-living things that interact with each other.
Biotic factors	They are living organisms in an ecosystem, such as humans, animals and plants.
Abiotic factors	They are non-living things in an ecosystem, such as water, air, soil, sunlight, and precipitation.
Antarctica	It is the desert biome that has a cold temperature all the year.
Hereditary traits.	They are the traits that are passed down from the parents to the offspring.
Genes	They are tiny structures which are present in cell nucleus and responsible for passing down traits from parents to their offspring.
Genetic factor	The factor that control what traits are passed down from parents their offspring.

2 Give a reason for:

- ① Dorcas gazelles can live in desert environment.
 - Because Dorcas gazelles can stay several months without drinking water.
- ② Birds migrate from one place to another place.
 - To search for best environmental conditions to reproduce.
- ③ Falcons and eagles migrate to Egypt in winter seasons.
 - Due to the moderate winter climate in Egypt.
- ④ Emperor penguin has thick fatty layer and dense feathers.
 - To keep its body warm in the cold weather.
- ⑤ African penguin has a circle of skin that doesn't have any feathers around each of its eyes.
 - To help it cool its body fast.
- ⑥ The body of the Arctic fox is covered with thick white fur.
 - To keep its body warm and to make camouflage.
- ⑦ Poison dart frog has big eyes.
 - To see at night.
- ⑧ Poison dart frog has colorful poisonous skin.
 - To protect itself from predators.
- ⑨ The body of a lizard is covered with sandy-colored scales.
 - To hide among rocks in desert.
- ⑩ Desert plants have thick stems or leaves.
 - To store water.
- ⑪ Desert plants have long roots.
 - To reach the deep groundwater.
- ⑫ Some desert plants have short, extended roots.
 - To absorb any available water.

- ⑬ Some desert plants have thorns.
 - To keep herbivores away.
- ⑭ A Birman cat has long and silky hair, while a Sphynx cat has a hairless body.
 - Because the Birman cat has the genetic factor of long, silky hair, while the Sphynx cat doesn't have this factor.
- ⑮ You must avoid smoking and drinking soda.
 - Because they affect negatively your health and growth.

3 What happens:

- ① If the climate in Egypt becomes extremely cold in winter?
 - Migratory birds will not migrate to Egypt in winter.
- ② To the living organisms if water is not available in an environment?
 - The living organisms can't survive, and they will die.
- ③ To the plants in an ecosystem, if they receive too intense light?
 - The plant parts get damaged by drying or burning.
- ④ If the Sphynx cat has the same genetic factors of hair length found in the Birman cat?
 - The sphynx cat will have long silky hair like birman cat.
- ⑤ If sanitation service isn't available in an environment?
 - It causes spread of different diseases.

4 Summary:

Adaptation

It's a process that helps living organisms survive in their habitats.

Structural (Physical) Adaptation

It's anything that is linked to the **body structure** of a living organism to help it survive in its habitat.

Behavioral Adaptation

It's anything that a living organism **does** or **acts** to help it survive in its habitat.

Examples:

A polar bear has white fur.



The thorns on a plant's stem



Dorcas gazelle uses its color to make camouflage.



Bird migration



A plant growing towards light



Elephants live in herds.



Migration:



It is a behavioral adaptation in which animals move together from one place to another, usually seasonally.

Example



Steppe Eagle

Reasons of bird migration:

- 1 To find the best conditions to reproduce (breed).
- 2 To find different food resources.
- 3 To find suitable habitats at different times of the year.

Challenges that face migratory birds:

- 1 Extreme weather
- 2 Predators
- 3 Limited access to food and water
- 4 Limited resting sites due to habitat loss



- » Migratory birds return to the place where they started, and the cycle of migration is repeated.
- » Physical traits would help some birds survive their migration journey more than others.

Migratory Birds in Egypt:

- » The **Red Sea** and **Nile River** are important stopovers for millions of migratory birds every year.

Reasons that attract migratory birds to Egypt:

- 1 The moderate winter climate
- 2 The Red Sea area includes different environments, such as:
 - a Marine
 - b Coastal
 - c Mountains

Falcons



Eagles

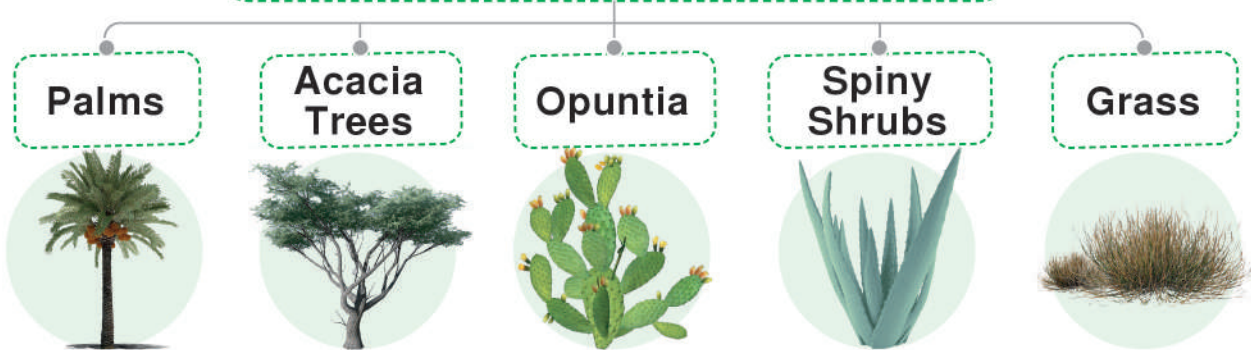


Structural Adaptation of Animals

Animal	Habitat	Structural (Physical) Adaptation	Reason
Dorcas Gazelle 	Desert and semi-desert (Egypt and the Middle East)	Fur color	→ To make camouflage.
Emperor Penguin 	Antarctic	Thick blubber (fatty layer) covered with dense feathers	→ To keep its body warm.
African Penguin 	Along the coast of South Africa	There is a circle of skin around its eyes without any feathers.	→ To cool off its body fast.
Arctic Fox 	Arctic region	Thick white fur	→ • To warm its body. • To make camouflage.
Poison Dart Frog 	Tropical rainforests	Colorful poisonous skin and big eyes	→ • To hide from predators. • To see at night.
Lizard 	Desert	Sandy-colored scales	→ To withstand heat and to hide among rocks in a desert.

Structural Adaptation of Plants

Plants in Western Desert in Egypt



Physical Adaptation	Figure	Reason
Small and herbal		To not lose water.
Short, shallow roots (Extended near the Earth's surface)		To absorb any available water from the upper soil.
Thick stems or thick, leathery leaves		To store water.
Thorns (prickles) on the stem		To keep herbivores away.

Some plants have other ways to adapt to drought, such as:

When the rain falls in deserts:

- 1 They sprout and reach the flowering stage quickly.
- 2 Flowers produce **long-lived seeds** to adapt to little rainfall.

Ecosystem

It is an area that contains living organisms and nonliving things that interact with each other.

The Size of an Ecosystem

Small Ecosystem

A small area of land between buildings that contains grass, insects, and weeds.

Large Ecosystem

The Arctic where,

- Caribou feed on grasses.
- Wolves hunt the caribou and other prey.

The Components of an Ecosystem

Biotic Factors

They are living organisms in an environment.

Examples:

- Humans • Animals
- Plants

Abiotic Factors

They are nonliving things in an environment.

Examples:

- Sunlight • Air • Soil • Water
- Precipitation • Temperature

Limited Resources in the Desert

» Deserts are one of the most extreme environments on Earth that have **little rainfall**.

» Deserts may be **hot** areas or **cold** areas.

1 Hot deserts:

- They have a very small amount of groundwater.
- Some plants benefit from **temporary pools** that form in rocks.
- Some plants have **long roots** to reach the deep groundwater.
- Other plants have **very short roots**, ready to catch the smallest drop of dew.

2 Cold deserts:

- Antarctica is a cold desert biome that has cold temperatures all year.



Factors Affecting Living Organisms' Growth and Survival

First: Environmental (Abiotic) Factors

They are **external (outside) factors** that influence the growth of living organisms.

» Living organisms have basic needs, such as:

- ① Light ② Water ③ Food ④ Air ⑤ Habitat

① Availability of Light (Abiotic Factors):

a The intensity of light:

- In general, plants use sunlight to make photosynthesis.
- If light is too intense, it may damage the plants' parts, making them dry or burn.



b The duration of light:

- Plants respond to the amount of light and dark they receive daily.

Some flowering plants may produce fruit when days are **longer** than nights.

Some flowering plants may produce fruit when days are **shorter** than nights, such as in **chrysanthemum**.

② Availability of Water:

- **Water** is very important for all living organisms to survive and grow.

③ Size of Habitat:

- The size of the habitat can impact the number of different species.

Second: Genetics Factors

They are internal factors, that are passed down from parents to offspring to determine their traits.

a) Size:

In normal conditions, an organism grows to be approximately the size of its parents.

b) The fur color:

The fur color is often similar to the color of one of its parents.

The Inherited Traits in living Organisms

» A **genetic factor** controls which traits get **passed down** from the **parents** to the **offspring**.

» The inherited traits affect the structure of living organisms.

1 In humans:



Eye color

2 In animals:



Pointy ears in cats

3 In plants:



Shape of leaves

Hereditary traits

They are the traits that are genetically passed on from the parents to the offspring.



① Hereditary Traits in Animals



Birman Cat

It has **long, silky hair** with different colors.

Sphynx Cat

It does not have any hair or may have fine hair.

Their Kittens:

A Birman kitten inherits its **long, silky hair** from its parents.

A Sphynx kitten inherits its **hairless body** from its parents.

Similarity:

They belong to the same **species** that is called **Felis catus**.

Give a reason for:

» There is no Sphynx cat that has long hair like a Birman cat.

- Because the Sphynx does not have the same genetic factors for long hair, which is found in Birman.

② Hereditary Traits in Desert Plants

Similarities:

- ① Desert plants grow in the same soil.
- ② Desert plants are exposed to the same amount of light.

Differences:

Desert plants have different colors, shapes, sizes, and heights.
Because they have different genetic factors.



Scientists analyzed many deserts, and they found that:

- » Desert plants have adapted to arid conditions, such as:
 - Extreme sun
 - Very little rainfall
- » Each generation becomes stronger as the inherited traits transfer from the parents to their offspring.

Factors that influence human growth and behavior development

1 Lifestyle Choices:

- Many of our lifestyle habits impact our health, growth, and development.



Bad Habits (Lifestyle)

Such as:

- 1 Smoking
- 2 Eating diets that include chips and soda.

They **negatively** affect your health and growth.



Good Habits (Lifestyle)

Such as:

- 1 Exercises
- 2 Eating diets that include proper nutrition

They **positively** affect your health and growth.

2 Environmental Factors:

- People do not have the ability to control the environmental factors.

Unhealthy Environment

They **negatively** affect your health and growth.



Healthy and Clean Environment

They **positively** affect your health and growth.

Some problems in unhealthy environments:

- 1 Healthcare is not available.
- 2 Water may be far away or unsafe to drink.
- 3 Food may be hard to find.
- 4 Sanitation is not available, which leads to the spread of diseases.

3 Genetic Factors:

- Genetic factors control the transfer of inherited traits from **parents** to **offspring**.
- Genes** are tiny structures found in the **cell nucleus** that carry inherited traits, so they determine:



The way your earlobes hang.



The length of your fingers.



Your height.

Revision on Concept 4.2

Soil and Environmental Change

Soil	It is a loose layer (delicate skin) that covers the Earth's crust.
Minerals	They are the building units of rocks.
Pores	They are spaces between particles of the soil and filled with air and water.
Humus	A dark, rich-nutrient organic matter in the soil that is formed from the decomposition of remains of dead plants and animals.
Decomposers	They are the living organisms that help in recycling nutrients from dead plants and animals back to the soil.
Weathering	It is the process which breaks down rocks into small particles by the effect of water and wind.

2 Give a reason for:

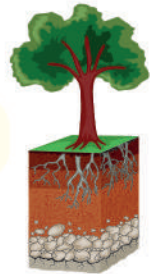
- ① **Soil is very important for plants.**
 - Because soil provides plants with air, water, and nutrients.
- ② **There are many types of soil.**
 - Due to the different amounts of ingredients that form the soil.
- ③ **Decomposers have an important role in the formation of soil.**
 - Because decomposers recycle the chemical nutrients found in the remains of dead organisms back to the soil.
- ④ **Sandy soil drains water quickly.**
 - Because it has a large pore spaces between its particles.
- ⑤ **Clay soil can retain more amounts of water and air.**
 - Because it has a small amount of pore spaces between its particles.
- ⑥ **The soil that retains medium amounts of water is more fertile.**
 - Because it keeps its organic materials and this helps the plant grow healthy.

3 What happens:

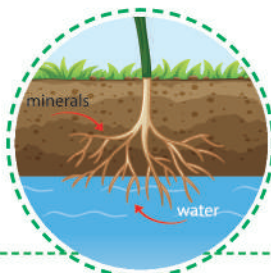
- 1 To the soil if the temperature of the ecosystem increases?
 - The soil may dry and lose its nutrients.
- 2 If the soil has a large amount of pore spaces between its particles?
 - Water will flow fast through it, so it retains a little amount of water.

4 Summary:

Soil It is a **loose layer (delicate skin)** that covers the Earth's crust.



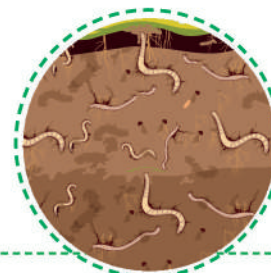
Soil Importance:



Soil provides plants' roots with **water**, **nutrients**, and **air**.



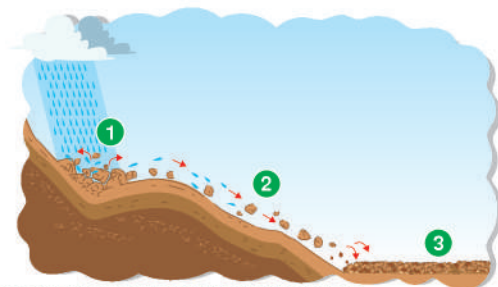
Soil provides animals and humans with **food**.



Soil is **home (shelter)** for some insects, like bacteria and worms.

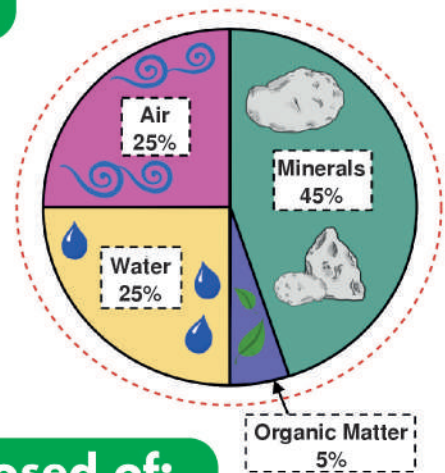
Soil Formation:

- 1 Rocks are broken down into smaller pieces through **weathering**.
- 2 The small pieces of rocks are carried away through **erosion**.
- 3 The small pieces precipitate and combine with other ingredients to form soil during **deposition**.



Soil Components:

- » Soil is a mixture of different components with different sizes.
- » You can see some of the soil components, but you can't see others.
- » Soil consists of **four** main components: **water**, **air**, **minerals**, and **organic matter**.



All types of soil are composed of:

Inorganic ingredients

Organic Ingredients

1 Inorganic Ingredients:

- They are nonliving things in the soil.

Examples: Water Air Rocks Minerals

- **50%** of the soil is composed of pores (spaces among particles) that are filled with **water** or **air**.
- **Minerals** are the building units (blocks) of rocks.

The different amounts of inorganic ingredients can change:

1

The appearance of the soil.

2

The texture of the soil.

3

The ability of the soil to retain water.

4

The ability of the soil to allow plants' roots to grow.

2 Organic Ingredients:

- They are the remains of dead organisms in the soil.

Examples: Humus Living organisms

- Soil fertility increases by increasing the amount of organic matter in the soil.

Decomposers:

- Decomposers are **environmental cleaners**.
- Decomposers play an important role in **balancing** the ecosystem.

Examples:	Bacteria  Fungi  Earthworms 
Their role in the ecosystem:	• Decomposers break down the organic matter of dead organisms into humus. • Decomposers recycle chemical nutrients, such as carbon, nitrogen, and oxygen, from dead plants and animals back into the soil, air, and water.

Humus:

- It is a **dark, rich-nutrient organic matter** that helps plants grow, and it is formed from the decomposition of dead organisms.

The different amounts of organic ingredients in the soil can change:

The appearance of the soil.

The soil fertility.

Types of Soil:



P.O.C	Sand	Silt	Clay
Color	Yellow	Gray	Dark (Black)
Particles Size	Large	Medium	Small
Draining Water	Fast	Medium	Slow
Retaining Water	Low	Medium	High

- **Silt** is the most fertile soil because the soil that retains a medium amount of water keeps its organic materials.

1 (A) Cross out the odd word:

1. Worms – Minerals – Fungi – Bacteria (.....)
2. Height – Eye color – Curly hair – Healthcare (.....)

(B) Give a reason for:

1. Falcons and eagles migrate to Egypt in winter seasons.

.....

2. Decomposers are considered nature's cleaners.

.....

2 (A) Complete the following statement:

- is one of the reasons for returning birds to their habitat.

(B) What happens:

1. If the plant is exposed to intense sunlight for a long time?

.....

2. To the minerals in the soil, if heavy rain falls on this soil?

.....

3 (A) Complete the following table:

P.O.C	Sand soil	Silt soil	Clay soil
Size of particles			

(B) Identify the type of factor (genetic – environmental – lifestyle):

- (a) Smoking
- (b) Availability of hospitals
- (c) Length of the fingers

1 (A) Write the scientific term:

1. They are the building units of rocks. (.....)
2. It is a desert biome that has a cold temperature all the year.
(.....)

(B) Give a reason for:

1. Birds migrate at different times of the year.
.....
2. Soil is very important for plants.
.....

2 (A) Mention the importance of:

- Humus:
.....

(B) What happens:

1. If the poison dart frog has small eyes?
.....
2. If straw and animal manure are added to the soil?
.....

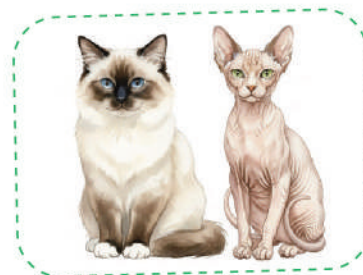
3 (A) Compare between:

- Structural adaptation – Behavioral adaptation
(Definition and an example for each one)
.....

(B) Give one example of each of the following:

1. A carnivorous animal in arctic habitat. (.....)
2. A plant grows when the daytime is shorter than the nighttime.
(.....)

- 1 (A) Although the two living organisms belongs to the same species, but they are different in hair length.**



1. Mention the reason of the difference between them.

2. Mention the name of this species.

(B) Give a reason for:

1. Some desert plants have shallow, short roots.

2. Clay soil acts as a water filter.

- 2 (A) Write the scientific term:**

• It is the loose layer which covers the Earth's crust.

(.....)

(B) What happens:

1. If the Arctic fox does not have thick fur?

2. To the nutrients in the soil, if heavy rain falls on this soil?

- 3 (A) Complete the following table:**

P.O.C	Sand soil	Silt soil	Clay soil
Retaining Water			

(B) Mention:

Ⓐ A behavioral adaptation in plant

Ⓑ A migratory bird

Ⓒ A decomposer

1 (A) Cross out the odd word:

1. Leopards – Frogs – Deers – Lions (.....)
2. Lizards – Palms – Opuntia – Frog (.....)

(B) Give a reason for:

1. Sand soil drains water quickly.

.....

2. Plants manage to adapt to warm and dry climates.

.....

2 (A) Choose the correct answer:

- The adaptation of living organisms to the environment leads to
- Ⓐ extinction Ⓑ survival Ⓒ migration Ⓓ death

(B) What happens:

1. If a green plant is placed away from a source of sunlight? (In terms of growth direction)

.....

2. To the soil if the climate of an ecosystem becomes too hot?

.....

3 (A) Write the scientific term:

1. They are the spaces between soil particles that filled with air or water.

(.....)

2. It is the process of breaking down rocks into small particles.

(.....)

(B) Give one example of each of the following:

1. A carnivorous animal in savannas.

(.....)

2. An insect lives in bogs.

(.....)

1 (A) Correct the following sentences:

1. A Sphynx cat has long, silky hair.

.....

2. Minerals, air, and water are from the organic ingredients of soil.

.....

(B) Give a reason for:

1. There are many types of soil on the Earth's surface.

.....

2. The variation in length and smoothness of the fur of cats of the same kind.

.....

2 (A) Compare between:

• Biotic factor – abiotic factors (According to: Definition and an example for each one)

.....

(B) What happens:

1. If there are no healthcare services available in some places?

.....

2. To the amount of air in the soil if heavy rain falls on this soil?

.....

3 (A) Complete the following table:

P.O.C	Sand soil	Silt soil	Clay soil
Flowing of Water			

(B) Identify the type of adaptation (Structural – behavioral):

Ⓐ Elephants live in herd

Ⓑ Desert plants have thick stems.

Ⓒ Arctic fox has a thick white fur.

Models answers

April Tests } Model Exam (1)

- Q 1 A) 1-** Minerals **2-** Healthcare
B) 1- Due to the moderate winter climate of Egypt.
2- Because decomposers break down the organic matter in dead bodies into humus that help the plant to grow and increase soil fertility.

- Q 2 A) •** Climate
B) 1- Light may damage the plant parts by drying or burning them.
2- The minerals may fall below the soil layers to form a hard layer that plant's roots can't penetrate.

Q 3 A) •

P.O.C	Sand soil	Silt soil	Clay soil
Size of particles	Large	Medium	Small

- B) a** Life style **b** Environmental factor
c Genetic factor

April Tests } Model Exam (2)

- Q 1 A) 1-** Minerals **2-** Antarctica
B) 1- To find best condition to reproduce and to find food resources.
2- Because soil provides the plant's roots with water, air and nutrients.

- Q 2 A) •** They help the plant to grow by increasing the soil fertility.
B) 1- The poison dart frog can't see well at night.
2- The depleted soil is restored and its nutrients increase.

- Q 3 A) •** Structural adaptation: Polar bear has a white fur.
 • Behavioral adaptation: Bird migration
B) 1- Wolves **2-** Chrysanthemum

April Tests } Model Exam (3)

- Q 1 A) 1-** They have different hair length, as Birman cat has a long silky hair, while sphinx cat has no hair.
2- Felis catus
B) 1- To get any dew of water from the upper soil.
2- Because clay soil has small pores between its particles.

Q 2 A) • Soil

- B) 1-** The Arctic fox can't warm its body, so it can't survive.
2- Nutrients will be washed away from the soil.

Q 3 A) •

P.O.C	Sand soil	Silt soil	Clay soil
Retaining Water	Low	Medium	High

- B) a** Plant grows toward light.
b A Falcons – Eagles **c** Bacteria – Fungi

April Tests } Model Exam (4)

- Q 1 A) 1-** Frogs **2-** Frog
B) 1- Because sand soil has large particles and large pore spaces between its particles.
2- Because they have physical characteristic that allow them to survive in arid conditions.

- Q 2 A) • b**
B) 1- The plant will grow toward light.
2- The soil becomes dry and loses its nutrients.

- Q 3 A) 1-** Pore spaces **2-** Weathering
B) 1- Lion **2-** Mosquitoes

April Tests } Model Exam (5)

- Q 1 A) 1-** A birman cat has long, silky hair
2- Minerals, air, and water are from the inorganic ingredients of soil.
B) 1- Due to the difference of their components.
2- Because they have different genetic factors.

Q 2 A) •

Biotic factor	Abiotic factors
They are living organisms in an ecosystem	They are non-living thing in an ecosystem
Humans – Animals – Plants	Humans – Animals – Plants

- B) 1-** It will negatively affect the human growth and survival.
2- Because they have different genetic factors.

Q 3 A) •

P.O.C	Sand soil	Silt soil	Clay soil
Flowing of Water	Fast	Medium	Slow

- B) a** Behavioral adaptation
b Structural adaptation
c Structural adaptation

5 Exams on Concept 4.1

Model Exam 1

Q1. (A) Choose the correct answer:

- 1 Both _____ and _____ are adapted to live in hot desert areas.

a. Arctic fox – lizard	b. lizard – Emperor penguin
c. dorcas gazelle – lizard	d. caribou – Arctic fox
- 2 _____ is from the _____ factors that affect the plant's growth.

a. Water – biotic	b. Light – abiotic
c. Soil – biotic	d. Temperature – biotic
- 3 All the following from the basic needs for animals to live in an ecosystem, except _____ .

a. water	b. predators	c. food	d. soil
----------	--------------	---------	---------

(B) Write the scientific term:

- It is a behavioral adaptation in which animals move from one place to another, usually seasonally. (_____)

Q2. (A) Cross out the odd word:

- Grass – Weeds – Light – Insects (_____)

(B) Complete the following sentences:

- 1 African penguin lives in _____ , while _____ penguin lives in the Antarctic.
- 2 From the plants that can be found in Western Desert of Egypt are _____ and _____ .

Q3. (A) Put (✓) or (x):

- The environmental factors transfer from parents to offspring. ()

(B) What happens if:

- 1 The genetic factor of long, silky hair is absent in a birman cat?
- 2 The plants in an ecosystem receive too intense light?

Model Exam 2**Q1. (A) Choose from column (A) what suits it from column (B):**

Column (A)	Column (B)
1 Extreme weather	a. affects the number of different species live in one place.
2 The size of habitat	b. from the challenges that face migratory birds
3 Eating healthy food	c. is a bad lifestyle choice.
	d. is a healthy lifestyle choice.

1 2 3

(B) Give a reason for:

- Desert plants have thorns surrounding their leaves and branches.

.....

Q2. (A) Put (✓) or (x):

- Antarctic is a hot desert biome. ()

(B) Write the scientific term:

- 1 They are tiny structures found in the cell nucleus that carry inherited traits. (.....)
- 2 They are the external factors that affect the growth of living organisms. (.....)

Q3. (A) Cross out the odd word:

- Caribous – Grasses – Soil – Wolves (.....)

(B) Complete the following sentences:

- 1 The plant parts that can store water are and
- 2 and are examples of migratory birds in Egypt.

Q1. (A) Put (✓) or (x):

- 1 Sphynx cats have the genetic factor for long, silky hair. ()
- 2 The Red Sea and Nile River in Egypt are important stopovers for many migratory birds. ()
- 3 In Arctic, caribou feed on wolves that feed on grass. ()

(B) What happens if:

- Water and light are not available in an ecosystem?
-
-

Q2. (A) Cross out the odd word:

- Exercises – Smoking – Eating chips – Drinking soda (.....)

(B) Write the scientific term:

- 1 It is an area that contains biotic factors and abiotic factors that interact with each other. (.....)
- 2 It is a type of adaptation that is related to the structure of a living organism that helps it to survive in its environment. (.....)

Q3. (A) Correct the underlined word:

- The length of your fingers is determined by some environmental factors. (.....)

(B) Look at the following figure, then complete the sentences:

- 1 This animal is called
- 2 The traits which this animal gets from its parents help it to adapt to the extreme conditions of habitat.



Model Exam 4**Q1. (A) Choose the correct answer:**

- 1 The size of Dorcas gazelle is similar to that of its parents is due to
 a. environmental factors b. generic factors
 c. light intensity d. a type of behavioral adaptation
- 2 _____ and _____ can live in the same environment.
 a. Arctic fox – acacia tree b. Acacia tree – palm tree
 c. Opuntia – Emperor penguin d. Lizard – Emperor penguin
- 3 Water, sunlight, and air are examples of _____ factors in the ecosystem.
 a. abiotic b. biotic c. living d. non-essential

(B) Write the scientific term:

It is the change in the act of a living organism to help it survive.(_____)

Q2. (A) Correct the underlined word:

- Thick fur of polar animals is considered as a behavioral adaptation.
 (_____)

(B) Complete the following sentences:

- 1 Desert plants have _____ leaves and stems to _____.
- 2 Plants respond to the amount of _____ and _____ they receive daily.

Q3. (A) Put (✓) or (X):

- Chrysanthemum plants grow and produce flowers when the day is longer than the night. ()

(B) What happens if:

- 1 Two similar plants are exposed to the same amount of light for the same period of time?
- 2 Flowers of desert plants produce seeds that can't live for a long time?

Model Exam 5

Q1. (A) Correct the underlined words:

- 1 Flower color is from the inherited traits in humans. ()
- 2 Nonliving things belong to the biotic factors in an ecosystem. ()
- 3 Migration of animals to search for food is considered a structural adaptation. ()

(B) Give a reason for:

- African penguin has a circle of skin that doesn't have any feathers around each of its eyes.

Q2. (A) Cross out the odd word:

- Smoking – Drinking more soda – Exercising – Eating chips

()

(B) Compare between:

P.O.C	Arctic Ecosystem	Desert Ecosystem
Climate		
Example of an animal that could live in it.		

Q3. (A) Put (✓) or (x):

- The grass plants are usually longer than the tall flowering plants in a forest. ()

(B) Look at the following figure, then complete:

- 1 This animal can live in
- 2 It has skin to



5

Exams on

Concept 4.2

Model Exam 1

Q1. (A) Choose the correct answer:

1. _____ is from invasive species in the Red Sea area.
 a. Arctic fox b. Lionfish c. Lion d. Leopard
2. If a soil in an area contains large amount of sand particles, so this soil _____.
 a. retains much water b. drains water slowly
 c. drains water quickly d. has small-sized particles
3. All the following cause desertification, except _____.
 a. overgrazing b. drought
 c. increasing green areas d. deforestation

(B) Give a reason for:

- Soil is very important for plants.
- _____
- _____

Q2. (A) Correct the underlined word:

- The size of clay particles is larger than the size of silt particles.

(_____)

(B) Complete the following sentences:

1. Sand soil has _____ color, while clay soil has _____ color.
2. The pore spaces between soil particles are filled with _____ and _____.

Q3. (A) Put (✓) or (x):

- Laws must be applied to prevent water pollution.

()

(B) Write the scientific terms:

1. It is a thin layer which covers the Earth's crust.
2. It is an organic material rich in nutrients produced from decomposition of remains of dead organisms.

(_____)

(_____)

Model Exam 2

Q1. (A) Put (✓) or (X):

- 1 Deer and lions are from the abiotic factors in savannas. ()
- 2 Deforestation is a process in which soil becomes more fertile. ()
- 3 Crops divarication means planting different types of crops and rotating them. ()

(B) Give a reason for the following:

- Decomposers have an important role in the formation of soil.
- _____
- _____

Q2. (A) Correct the underlined word:

- Bogs are dry grassland ecosystem. (_____)

(B) Write the scientific term:

- 1 It is too much increase in the number of one type of species in a habitat. (_____)
- 2 The type of a new species that is brought by a human to a habitat. (_____)

Q3. (A) Arrange the following types of soil ascendingly according to the amount of water that they can hold.

- Silt soil – Caly Soil – Sand Soil.
- _____

(A) Look at the following figure then complete the following sentences:

- 1 Soil is considered as a _____ for these living organisms.
- 2 If these organisms disappear from soil, the soil fertility will _____.



Model Exam 3

Q1. (A) Choose from column (A) what suits it from column (B):

Column (A)	Column (B)
1 Forest fires	a. are the building units of rocks.
2 A glue-like substance	b. release seeds from sealed pods
3 Minerals	c. is produced from the chemical change of the topsoil.
	d. is produced from the chemical change of the subsoil.

1 2 3

(B) What happen to:

- The living organisms when they can't adapt to the climate changes?

Q2. (A) Classify the following animals to their ecosystem:

(Frogs – Cheetahs – Lions – Mosquitoes)

Bogs	Savannas
.....	

(B) Complete the following sentences:

- Adding crop residues returns back to the depleted soil.
- The spaces between soil particles are called

Q3. (A) Correct the underlined word:

- When the number of predators decreases in a habitat, the number of prey will decrease. (.....)

(B) Mention two ways to reduce the soil erosion:

-
-

Model Exam 4

Q1. (A) Choose the correct answer:

- 1 When the percentage of carbon dioxide gas in the atmosphere increases, the Earth's temperature _____.
a. reduces **b.** isn't affected
c. remains constant **d.** increases
- 2 Remains of dead animals and plants are considered from the _____ components of the soil.
a. biotic **b.** living **c.** organic **d.** inorganic
- 3 _____ is/are from herbivore that live in savannas.
a. Gazelles **b.** Caribou **c.** Cheetahs **d.** Lions

(B) Write the scientific term:

- It is a process by which the land becomes unfertile. (_____)

Q2. (A) Put (✓) or (X):

- Removing green areas reduces the water pollution. ()

(B) Give reason for each of the following:

- 1 Overusing of pesticides may harm the soil.

- 2 Water can flow very fast through sand soil.

Q3. (A) Cross out the odd word:

- Hurricanes - Floods - Building houses - Earthquakes ()

(B) Compare between:

P.O.C	Volcanic Eruptions	Diseases of Living Organisms
Beneficial roles for a habitat		

Model Exam 5

Q1. (A) Put (✓) or (x):

- 1 Large trees can't grow in wet sand soil of savannas. ()
- 2 Using traditional bricks and concrete doesn't harm the environment. ()
- 3 Lionfish harms the native species that live in the Red Sea areas. ()

(B) What happens when:

- The number of predators in a habitat decreases?

Q2. (A) Cross out the odd word:

- Erosion - Deposition - Radiation - Weathering ()

(B) Mention two natural changes that cause habitat destruction?

Q3. (A) Choose from column (A) what suits it from column (B):

Column (A)	Column (B)
1 Adding sand and silt to soil	a. increases the soil erosion.
2 Increasing the inclination of the land	b. doesn't affect the soil erosion.
	c. reduces the soil erosion.

- 1 2

(B) Study the following figures, then complete the following sentences:

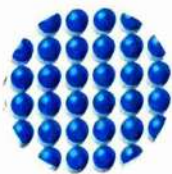


Figure 1



Figure 2



Figure 3

- 1 The soil in figure 1 retains amount of water than the soil in figure 3.
- 2 The soil in figure 2 allows water to drain than the soil in figure 1, because it has pore spaces.

حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

اختبار شهر ابريل



Science

Exam

1

1 A) Complete the sentence:

The leaves of plants in the western desert are

B) Give a reason for each of the following:

(1) Some plants died when exposed to the sun for a long time.

▶

(2) The importance of soil.

▶

C)  How can nature be habitat destructive?

▶

D)  Compare the Sphynx cat and the Birman cat in terms of
(hair – genre)

	the sphynx	the birman cat
hair	▶	▶
genre	▶	▶

2 A) Write Put true or false:

Fur color is from inherited traits in humans ()

B) Give a reason for each of the following:

(1) The arctic fox has thick fur.

▶

(2) Soil suffers from poor agriculture.

▶

C) Mention the importance of genes.

▶

D)  How do inorganic components turn into soil?



3 A) Choose the correct answer:

(1) Desertification results from

(a) horticulture

(b) over-cutting of forests

(c) allowing native plants to flourish

(d) gradual farming

(2) One of the factors that increase soil erosion is

(a) increased slope

(b) humidity

(c) evaporation

(d) digging trenches

B)  What role do decomposers play in the soil formation and nutrient recycling in an ecosystem?



C)  Explain how the porosity of soil affects the type of ecosystem.



D)  What are the inorganic components that make up the soil?



4 A) Put true or false:

(1) Water is one of the basic ingredients of the soil. ()

(2) Crop diversification is considered one of the methods that help soil restoration. ()

B)  What can be learned about an ecosystem by examining its soil?



C)  How do the environment and genetic factors affect the growth of living organisms?



D)  How are soil and environmental changes related?

**Science****Exam****2****1 A) Choose the correct answer:**

Humus is rich in

(a) water (b) nutrients (c) sand grains (d) oxygen

B)  Write the environmental factor or factors under the type of organism behavior it would affect for:

(size of habitat - water – availability of light)

(1) Trees and shrubs growing in an ecosystem.



(2) Animal growth during its life cycle.



(3) The amount of food that living organisms decide to forage.



(4) Number of different species living in one place.

**2 A) Write the scientific term:**

a reason that Egypt is the main attraction for migrating flocks (.....)

B) Give a reason for the following:

(1)  Birds face some challenges during their migration journeys.



(2)  The lionfish is considered an invasive species in the Red Sea.



(3) Removing vegetation has a negative impact on sloped soil.



c)  How do genetic factors help the Dorcas gazelle withstand high temperatures?



3 A) Put (✓) or (X):

(1) Hereditary traits don't play a role in the ability of living organisms to survive. ()

(2) Sand particles in the soil are the largest-sized particles. ()

B) What happens...?

If the poison dart frog doesn't have big eyes.



C) Define:

(1) Overgrazing: ▶

(2) Desertification: ▶

4 A) Choose the correct answer:

(1) Which of the following is an abiotic component of soil?

(a) Decomposers (b) Plants (c) Air (d) Fungi

(2) Sphynx cat has

(a) very long hair

(b) long and silky hair

(c) no hair or very fine hair

(d) black feathers

B)  What are the organic components that make up the soil?



C)  What can be done to slow down the erosion of soil?



D) How does the increase in certain numbers of organisms lead to habitat destruction?



Science

Exam

3

1 A) Choose the correct answer:

Clay soil has flowing of water than sand soil.

B) Give a reason for each of the following:

(1)  The length and the texture of cats' hair vary with in the same breed.



(2) Sand soil can't hold water well.



(3) Birds migrate at different times of the year.



(4) Decomposers maintain the ecosystem balance.



2 A) Choose the correct answer:

The white fur of a polar bear that allows it to live in extremely cold regions is considered adaptation.

- (a) structural (b) behavioral (c) mechanical (d) chemical

B) What happens when...?

- (1) Digging trenches in sloped soil.

▶

- (2) The Dorcas gazelle didn't inherit its sandy color.

▶

- (3) Add straw or stalk residues to the soil.

▶

- (4) An african penguin has dense feathers around each eye.

▶

3 A) Put (✓) or (X):

- (1) Types of soil differ in their color and their ability to hold water. ()

- (2) The thick fur is from the behavioral adaptations. ()

B) How does the size of soil particles affect water flow?

▶

C) Why is humus important for soil and plants?

▶

D) How does the intensity of light affect growth of the plants?

▶

4 A) Write the scientific term:

- (1) Structures in the living organism cell of living organisms that transfer traits from parents to offspring. (.....)
- (2) The loose layer that covers the Earth's surface. (.....)

B) Mention the following:

- (1) Two types of adaptations that living organisms need to survive.
▶
- (2) The different environmental factors that help living organisms grow.

C) Why do some desert plants have thick stems or leaves?

▶

Science Exam 4**1 A) Choose the correct answer:**

The soil with the medium-sized particles is soil.

- (a) sand (b) silt (c) clay (d) hard

B) Give a reason for the following:

- (1) Lizards have sandy-colored scales.

▶

- (2) Arctic foxes have thick fur.

▶

- (3) The type of soil varies from one environment to another.

▶

- (4) The soil called a loose layer.

▶

2 A) Complete the sentence:

Air is considered one of the Factors.

B) What happens when ...?

(1) There is no decomposer in the soil.

▶

(2)  The African penguin has moved to the South Pole.

▶

(3) Mixing sand and clay soils.

▶

C)  Explain the methods farmers have devised to overcome desert soil.

▶

3 A) Put (✓) or (X):

(1) Removing plants protects the soil from erosion. ()

(2) The size of a living organism is one of the traits that are affected by genetic factors. ()

B) Compare sand soil and clay soil in terms of particle size.

▶

C) Why do some plants have thorns on their stems?

▶

D)  What is the result of placing a green plant a side from the sun (in terms of growth direction)

▶

.....

.....

.....

4 A) Write the scientific term (two terms):

- (1) The spaces between soil particles that are filled with water or air. (.....)
- (2) The seasonal movement of animals from one place to another and it's considered a behavioral adaptation. (.....)

B) Mention the following:

- (1) One effect of drought.

▶

- (2) The importance of deging trenches

▶

C) Why do farmers add straw and animal manure to the soil?

▶

Science**Exam****5****1 A) Put true or false:**

Soil fertility increases as the amount of organic matter in it increases. (.....)

B) Give a reason for the following:

- (1) Emperor penguins have thick blubber and dense feathers.

▶

- (2) Bogs retain water for a long time.

▶

- (3) Camels are adapted to the desert environment.

▶

- (4) The type of soil varies from one environment to another.

▶

2 A) Complete the sentence:

A method of reducing erosion of soil due to both wind and water is

.....

B) What happens when ...?

(1) Heavy rain falls on the soil (in terms of nutrients)?

▶

(2) The temperature rises relative to the soil.

▶

C)  Mention two structural adaptations for a hen.

▶

D) What is the importance of animal manure to the soil.

▶

3 A) Write the scientific term:

(1) It contains biotic factors and abiotic factors that interact with each other.

(.....)

(2)  The way an organism behaves that help to survive.

(.....)

B) Why do some plants in hot deserts have long roots?

▶

C) Mention one difference between clay soil and sand soil

▶

D) Essay question:

 How can soil variety be described?

▶

4 A) Choose the correct answer:

- (1) All the following are biotic factors except
(a) insects (b) birds (c) soil (d) grasses
- (2) The process by which the land becomes infertile and turns into a desert is called
(a) weathering (b) deposition (c) desertification (d) erosion

B) Give an example of an animal's behavioral adaptation that lives in a swamp.

▶

C) How do genes affect the shape of the human nose?

▶

D) Mention two natural factors that destroy habitats.

▶



Exam (1)

- 1 **A)** small, leathery leaves / prickles or thorns / thick stems and leaves / long roots.
B) (1) Because light that is too intense can damage plant parts and cause drying or burning.
(2) Because without soil, the plants that people and animals need to survive would not exist. Soil contains the food, air, and water that plants need to grow.
C) By hurricanes, fires, floods, volcanic eruptions, earthquakes, diseases, and lack of food.
D) Sphynx cat: no hair or very fine hair / Birman cat: long, silky hair with varying colors / both are same species (*Felis catus*).
- 2 **A)** ☒ False.
B) (1) It will not be able to withstand low temperatures and may freeze.
(2) The soil becomes infertile and desertification may occur.
C) Genes determine everything from eye color to nose shape, leaf type, ear shape, and how tall an organism can become.
D) Rocks break down through weathering into smaller pieces, carried by erosion, then precipitate and combine with other ingredients to form soil.
- 3 **A)** (b) over-cutting of forests. (a) increased slope.
B) Decomposers recycle dead plants and animals into chemical nutrients (carbon, nitrogen, oxygen) released back into soil, air, and water, forming humus which helps plants grow.
C) Porosity affects water retention and root growth. Sandy soil drains quickly (fewer plants), clay soil holds water (bog plants), silt is medium.
D) Rock and mineral components (sand, silt, clay), air, and water.
- 4 **A)** (1) True. (2) True.
B) The types of plants that can grow, amount of nutrients, water retention, and what organisms live there.
C) Genetic factors (inherited traits) determine growth rate, skin, hair and eyes color; environmental factors (light, water, soil, temperature) affect the quality of this growth rate.
D) climate changes the soil's water, nutrients and layers, and the plant growing in that soil changes the temperature and weather.

Exam (2)

- 1 **A)** (b) nutrients.
B) (1) availability of light / water. (2) water.

- (3) size of habitat. (4) water / size of habitat.
- 2 **A)** (moderate winter climate / suitable homelands / breeding resources)
B) (1) Because they face extreme weather, predators, limited food/water, and limited resting sites due to habitat loss.
(2) Because it kills native fish; in some areas, lionfish caused 79% loss of young native fish.
(3) Because vegetation removal increases water speed over ground, eroding soil, especially on slopes.
C) The dorcas gazelle inherits sandy color and other traits that help it survive high temperatures and desert conditions.
- 3 **A)** (1) ☒ (2) ☒
B) It may not survive because big eyes help it see prey and predators.
C) (1) Overgrazing: when animals eat too much vegetation, leading to soil depletion and desertification.
(2) Desertification: process where land becomes infertile and turns into desert due to deforestation, drought, or overgrazing.
D) Rock and mineral components (sand, silt, clay), air, and water.
- 4 **A)** (1) (c) Air. (2) (c) no hair or very fine hair.
B) Humus (from decomposed plants and animals), organic matter, dead leaves, twigs.
C) Planting plants, digging trenches, adding sand and silt, using crop residues (straw, stalks), natural fertilizers (animal manure), crop diversification, and rotation.
D) Overpopulation leads to less food, water, shelter, and space for other populations, straining resources and causing habitat destruction.

Exam (3)

- 1 **A)** slow.
B) (1) Because genetic factors control traits passed from parents to offspring; different genes produce different hair length and texture even within same breed.
(2) Because sand particles are the largest, so spaces (pores) are large; water drains quickly and is not retained.
(3) To find best resources for successful breeding, different food sources, or suitable homelands at different times of year.
(4) Because decomposers break down dead organisms into nutrients, recycle them, and act as environmental cleaners.
- 2 **A)** (a) structural.



- B)** (1) It helps reduce erosion by slowing water movement over ground.
 (2) It would not be camouflaged in the desert, making it easier for predators to see it.
 (3) Nutrients are added back to the soil, restoring soil health.
 (4) It would not be able to cool its body to withstand high temperatures (since the featherless eye circle helps cooling).

3 A) (1) ✓ (2) ✗

B) Larger particles (sand) → larger pores → water flows quickly. Smaller particles (clay) → smaller pores → water flows slowly.

C) Humus is rich in nutrients, helps plants grow, and improves soil structure and water retention, so both help in soil balance.

D) Light intensity affects plant growth; too intense can cause drying/burning; low intensity reduces growth. Duration also affects flowering and fruiting.

4 A) (1) genes. (2) soil.

B) (1) structural and behavioral.

(2) Sunlight, air, soil, water availability, precipitation, temperature.

C) To store water and keep away herbivores (thorns).

Exam (4)

1 A) (b) silt.

B) (1) To camouflage in sandy desert environment and avoid predators.

(2) To withstand low temperatures and keep from freezing in the Arctic.

(3) Because of differences in climate, rainfall, temperature, and parent rock material.

(4) It is a mixture of rock, minerals, organic matter, air, and water that covers the earth's system.

2 A) abiotic.

B) (1) Dead plants and animals would not be broken down; nutrients would not be recycled; soil would become less fertile.

(2) It would freeze because it lacks the featherless eye circles that help cool the body in warm climates.

(3) Water retention becomes medium; drainage improves; soil becomes more suitable for more plant types.

C) Reusing water, improving soil quality, using solar energy or wind turbines, growing crops that withstand heat and low-fertility soil.

3 A) (1) ✗ (2) ✓

B) Sand: largest particles, drains quickly. Clay: smallest

particles, holds water tightly.

C) To keep away herbivores (protection adaptation).

D) The plant grows toward the light (behavioral adaptation).

4 A) (1) pores. (2) migration.

B) (1) Less water available for growing crops, farming animals, industry, and cities; can lead to desertification.

(2) This would reduce soil erosion

C) To add back nutrients that have been depleted (natural fertilizer).

Exam (5)

1 A) ✓ True.

B) (1) To withstand low temperatures and keep from freezing in the Antarctic.

(2) Because it's clay-rich soil holds water very well, the soil may be wet most of the time.

(3) As camels have a hump on their back to store fat and energy, and their long legs.

(4) Because of differences in climate, rainfall, parent rock, and organic matter content.

2 A) planting trees.

B) (1) Nutrients may be washed away from the soil.

(2) Water evaporates faster; soil becomes drier; plants may wilt.

C) Two structural adaptations for a hen: feathers, wings, beak, claws (any two).

D) Animal manure adds nutrients to the soil (natural fertilizer) and helps restore soil health.

3 A) (1) ecosystem. (2) behavioral adaptation.

B) To reach groundwater far below the surface in dry desert environments.

C) Clay soil has smaller particles and holds more water; sand soil has larger particles and drains quickly.

D) Soil variety can be described by color, texture, particle size (sand/silt/clay), water retention, and organic matter content.

4 A) (1) soil. (2) desertification.

B) Migration (birds), living in herds, plant growing toward light, frogs live in swamps, hiding under mud from predators.

C) Genes carry instructions that determine nose shape, inherited from parents.

D) Hurricanes, fires, floods, volcanic eruptions, earthquakes, diseases, lack of food.

حمل الآن

مجاناً وحصرياً

المراجعة رقم (5)

اختبار شهر ابريل



Concept 1: Adaptation for Survival
Get started Lessons one and two

Week (9)

Date: / /

Class Performancer:

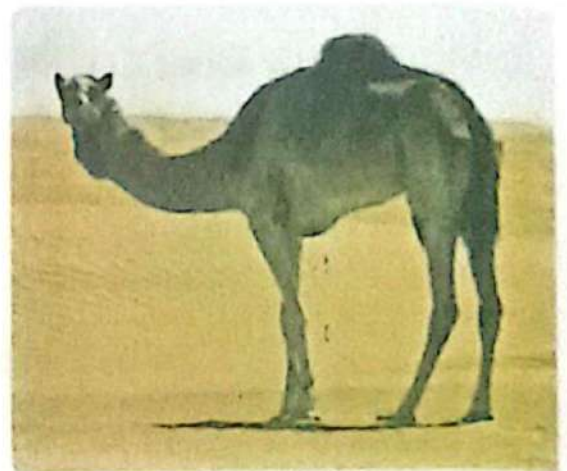
- Many living organisms once inhabited the Earth's surface and became extinct because they were unable to adapt to their environments, while others were able to adapt to their surroundings.



- Use the internet to research these organisms, learn about the reasons for their extinction, and display their stories in a school magazine or discuss them during morning assembly.
- The camel is the ship of the desert.

The camel is considered one of the animals most adapted to the harsh desert environment.

- Identify some characteristics that helped the camel adapt to the desert environment.



.....

.....

.....

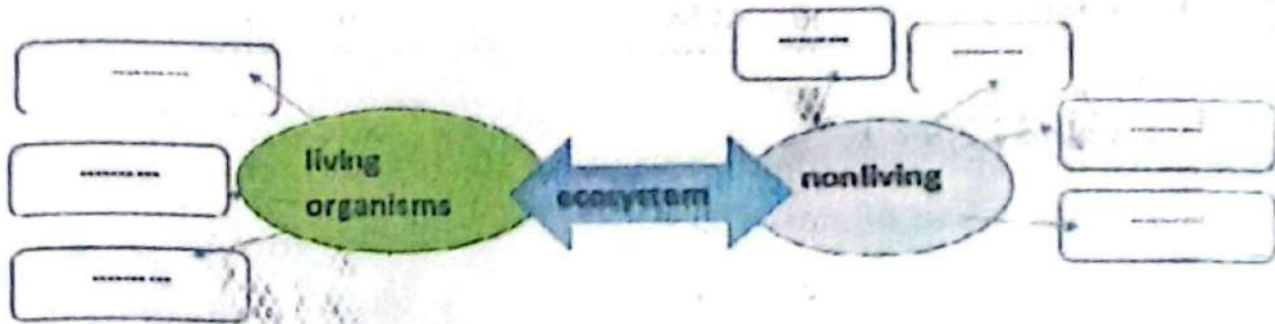
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Complete the following diagram:



Observe the table opposite and then answer:

1. In which decade did the greatest increase in temperature occur?

.....

2. What is the relationship between human activities and this increase?

.....

decade (10 years)	Average of increasing in temperature
1990	0.8
2000	1
2010	1.2
2020	1.55

3. What is the impact of the continuation of this trend on ecosystems?

Ice:.....

Living Organisms:.....

4. Suggest two solutions to reduce this increase.

.....

.....

Look at the picture then answer:



Steppe eagle

- Seasonal migration is a adaptation
- Steppe eagles migrate with the aim of and
- The steppe eagle has a sharp and strong beak, and this is a adaptation
- The steppe eagle has structural adaptations such as that help it fly long distances.

FOCUS!

Compare the African penguin and the emperor penguin in terms of:

- 1- Habitat:
- 2- Temperature:
- 3- Structural adaptations:



African Penguin



Emperor Penguin

Using the Student book and in light of what you have studied, write what the following refers to:

Adaptation	
Migration	
Ecosystem	

Home performance (Homework):

Complete the following:

- 1- Air is considered one of the factors.
- 2- Palm trees are adapted to in the desert.
- 3- Fish migration is considered one of the adaptations.
- 4- Environmental factors that affect a living organism include and
- 5- adaptations of a living organism are related to its body structure.

Read the following statements then correct the incorrect ones:

- 1- Fur color is considered a structural adaptation.
- 2- The size of an organism's natural habitat does not affect its growth.
- 3- The size of an organism is a characteristic that is not affected by genetic factors.

4- The emperor penguin's body is covered with thin skin to overcome the low temperature.

How do environmental factors affect the growth of living organisms?

.....

Weekly Assessment

First Test

Complete: The thorns on the stems of some plants are considered adaptation

Write what the phrase indicates:

The seasonal migration of animals from one place to another and considered a behavioral adaptation.

Explain the scientific reason:

Plants manage to adapt to warm and dry climates?

What happens: If the poison dart frog doesn't have big eyes.

How do genetic factors affect the growth of living organisms?

Second Test

Complete: The leaves of plants in the Western Desert are

Write what the phrase indicates:

A behavior or any way acts by a living organism to survive.

Explain the scientific reason:

How can the Dorcas gazelle camouflage in the desert?

What happens : Lack of light for plant growth

Explain the reasons for bird migration?

Third Test

Complete: The is considered one of the reasons for birds returning to their habitat.

Write what the phrase indicates:

The process by which a living organism becomes capable of living in an environment in a way that enables its survival.

Explain the scientific reason:

Birds migrate at different times of the year?

What happens: If the Arctic fox does not have a thick fur

Mention the different environmental factors that help living organisms to grow?

Concept 1: Adaptation for Survival**Week (10)****The rest of lesson two and lesson three****Date:** / /**Class Performance**Write a suitable description for each of the following pictures:*plant bending towards the light*Look at the picture and then answer:

a- Chicks resemble their mother hen because of.....

b- Mention two structural adaptations of a hen:

.....

.....



c- Chicks resort to a behavioral adaptation to obtain protection and warmth.

Explain this.

Compare the Birman cat and the Sphynx cat in terms of



Type:

Genetic Characteristics:

Both the Birman cat and the Sphynx cat belong to the same cat species despite their different characteristics. Explain this sentence.

.....
.....

It is a misconception that humans only need healthy food to maintain growth and behavioral development. Explain.

.....
.....

Home performance (Homework)

Complete the following:

- 1- A plant grows when the day is shorter than the night.
- 2- Light is one of the factors.
- 3- The factors that affect the internal and external development of a human being are and

Compare the Sphynx cat and the Birman cat in terms of:

Hair:

Genre:

It was found that the offspring have the same eye color as the father. Explain the reason.

.....

What happens if a plant is exposed to intense sunlight for long periods?

.....

Correct the following statements:

1- An unhealthy environment positively affects human life.

.....

2- Height and skin color are considered abiotic factors that affect human life.

.....

Identify the type of factor (genetic – environmental – lifestyle):

1- Smoking practice (.....)

2- Availability of hospitals (.....)

3- Length of hand fingers (.....)

Weekly Assessment

First Test

Complete the following: The Sphinx cat and the Berman cat belong to the cat breed.

Write what the statement indicates:

Information and characteristics that determine the traits of a living organism and are passed down from parents to offspring. (.....)

Choose the correct answer: All of the following behavioral adaptations except (Migration – Living in burrows – thorns on the leaves of some plant – the plant's growth towards light)

What happens: When a green plant is placed away from the source of sunlight. (in terms of growth direction)

.....

Give reason: Some plants have long roots?

.....

Second Test

Complete the following: Genes found in the of the cell.

Write what the statement indicates: A plant grows faster when the period of the day is shorter than the night. (.....)

Choose the correct answer: All of the following are structural adaptations except

(size of plant leaves - direction of plant growth- thorns on plant leaves - length of stem)

What is the result of: Placing a green plant away from the source of sunlight. (in terms of growth direction)

Give reason: The length and texture of cats' hair vary for the same breed.

Third Test

Continue the following: The survival of living organisms despite extreme conditions is related to the..... factors.

Write what the statement indicates: An organelle in the cell responsible for reproduction and building special information about the cell. (.....)

Choose the right answer: All of the following lifestyles except

(smoking - healthcare services – food system – practice the sports)

What happens when: Healthcare services are not available in some places.

Give reason: Some plants have short, extended roots near the earth's surface.

Concept 2: Soil and environmental changes
Lessons one and two

Week (11)

Date: / /

Class Performancer:

Soil is considered one of the ingredients of the lithosphere of the Earth planet.

1-Identify the importance of soil for both humans, animals, and plants:

The importance of soil		
For human	For plants	For animals

2-Study the following picture then answer what is required:

-Identify the factors that changes the soil as shown in the left side.



Describe the soil in the following pictures in one word from the following:

(healthy - unhealthy)

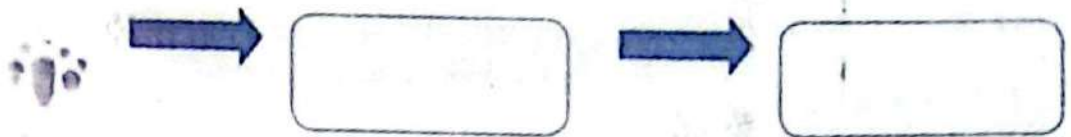




In your opinion, what makes soil unhealthy?

The stages of soil formation start with:

weathering

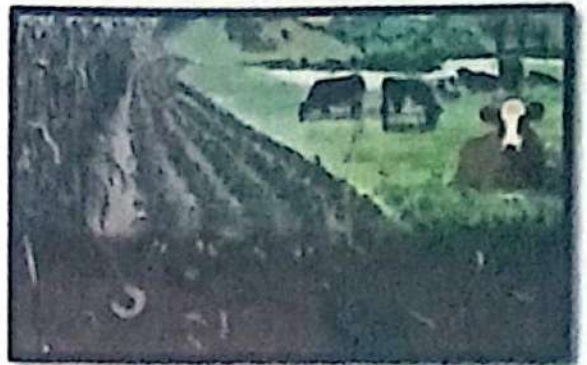


Notice the following picture then answer

a- Organic ingredients in soil such as insects and worms (True – False)

b- Soil contains particles of, and

c- Environmental cleaner that decomposes dead organisms called

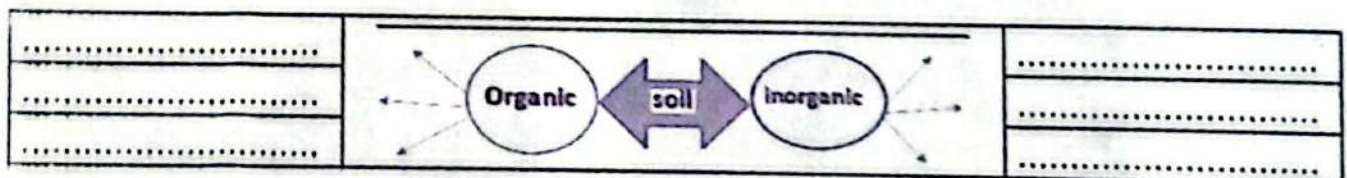


1- Decomposers work to create a biosphere for new life. (Explain the sentence)

Complete: Soil ingredients:



Complete the following chart:



By using the student book and according to what you have studied, write what the following refer to:

Soil	
Humus	

Home performance (Homework):

Complete the following:

- 1-, and are from the biotic soil ingredients.
- 2- The clay soil particles isin size.
- 3- The process of moving rocks from one place to another is known as
- 4- The two basic processes in soil formation are..... and

Read the following sentences then correct the incorrect ones:

- 1- Hums increases soil fertility.
- 2- Water is one of the basic ingredients of soil.
- 3- The soil consists of a mixture of organic matter only.
- 4- The large sized particles in the soil make it more water-retaining.
- 5- One of the characteristics of sandy soils is its large sized particles and low water retention.

Decomposing work in maintaining the balance of the ecosystem. Explain that?

.....

Weekly Assessment

First Test

Complete the following: Silt soil are in size.

Write what the statement indicates: The loose delicate layer of the earth. (.....)

Give reason: The type of soil vary from one environment to another.

.....

What happens: If the soil particles is large in size.

Mention the importance of soil for plants.

Second Test

Complete the following: and are from the basic processes in soil formation.

Write what the statement indicates: Spaces between soil particles filled with water or air

Give reason: Decomposers play an important role in the balance of the ecosystem.

What happens: when animal manure is added to the soil.

Determine the importance of soil to other organisms.

Third Test

Complete: are the remains of organisms that have died and decayed.

Write what the statement indicates: A type of soil characterized by its large sized particles and low water retention

Give reason: Decomposers are considered environmental cleaners?

What happens: when the temperature rises relative to the soil.

Identify the importance of soil for humans and animals.

The Second Monthly Exercise

Write down what the following sentences indicate:

- 1- Organic components rich in nutrient produced by the decomposition of dead organisms. (.....)
- 2- A natural area in which an interaction between biotic and abiotic factors occurs. (.....)
- 3- Poorly aerated soil and it has small grains. (.....)
- 4- The way an organism behaves that help to survive. (.....)
- 5- One of the behavioral adaptations is when animals move from one place to another seasonally. (.....)

Complete the following statements:

1. Sand soils are characterized by fertility
2. Desert lizards covered with sand-colored scaly skin is an adaptation.
3. The thick fur of polar animals is one of the adaptations
4. Rocks are broken up into smaller and smaller pieces through the process of
5. Inorganic ingredients of the soil are
6. Plant growth towards light is considered adaptation.
7. Thorns on the stems of some plants are considered to be adaptation.
8. factor is one of the external influences that affect the growth and behavior of the organism.
9. The migration of some eagles through the Red Sea region is considered adaptation.
10. The Dorcas gazelle can live in areas
11. Palm trees have that help them absorb groundwater.

What is **meant** by:

- 1- Soil pores:
- 2- Genetic traits:
- 3- Humus:
- 4- Decomposers:
- 5- Soil:
- 6- Adaptation:

Choose the **odd** word:

- 1- Sand - humus - clay - silt.
- 2- Wide eye - plant height - swimming skill - skin color.
- 3- Air - water - decomposing organisms - rocks.
- 4- Sunlight - Precipitation - Temperature - Insects.

Put (☒) or (☐) in front of the following sentences:

- 1- Genetic factors help the Dorcas gazelle to withstand high temperatures. ()
- 2- Minerals are organic ingredients in the soil. ()
- 3- All the soil ingredients can be seen. ()
- 4- Lifestyles do not affect human growth. ()
- 5- Soil fertility increases as the amount of organic matter in it increases. ()
- 6- All agricultural crops can be grown in the desert environment. ()
- 7- The shape and behavior of living organisms vary according to their habitat and the type of food they depend on. ()

Give **one** **example** the following:

- 1- Some desert plants have thick stems and leaves.

.....

- 2- The importance of decomposers to the ecosystem.

.....

3- Decomposers are considered cleaners for the environment.

4- The emperor's penguin has a thick skin covered with thick feathers

5- Desert plants have thick stems and leaves.

Choose the right answer:

1- All the following are from Soil ingredients except

- (a) water (b) air (c) glass (d) organic matters

2- Chrysanthemums grow better in the season

- (a) Spring (b) Winter (c) Autumn (d) Summer

3- All the following adaptations help plants that live in the desert to survive except

- (a) thick stems (b) short branched roots
(c) sharp thorns (d) broad leaves

4- The Dorcas gazelle has.....that helps it to live in the desert.

- (a) white fur (b) thick feathers
(c) flaky skin (d) brown fur.

5- Soil in the desert is characterized by..... fertility.

- (a) high (b) low (c) medium (d) neutral

6- All of the following are reasons for the birds and animals' migrations except

- (a) searching for food. (b) reproduction and survival.
(c) new habitat. (d) escaping from enemies.

7- The traits that are passed down from parents to children are

- (a) genetic traits. (b) acquired traits.
(c) environmental traits. (d) adaptational traits.

What happens if

1-The African penguin has moved to the South Pole.

.....

2-The decomposers were not found in the soil.

.....

Answer the following questions

1- Mention the importance of genes.

.....

2- Compare between sandy soils and clay soils. (In terms of water retention)

.....

3-Give an example for: behavioral adaptation – animals that live in swamps.

.....

4-Mention the challenges that birds face during their migration.

.....

5-What is meant by soil? Mention its components and what is the importance of soil for plants?

.....

.....

Compare between sandy soils and clay soils in terms of particles size and cohesion:

Type of soil	Size of particles	Cohesion
Sandy soil		
Clay soil		

Look at the corresponding shape, then choose:

1- This picture is for (Pharaonic Cat – Berman Cat)

2- This cat has long, silky hair due to factor.

(genetic – environmental)



Identify the picture of each animal then mention an example of a structural adaptation that enables it to survive in the environment in which it lives:



Figure (A):

Figure (B):.....

Example of Structural Adaptation

.....

.....

حمل الآن

مجاناً وحصرياً

المراجعة رقم (6)

اختبار شهر ابريل



March Revision



-Choose the correct answer:

- 1-Thick fur of animals which live in cold areas, is an adaptation that looks like the
a-presence of thorns on a plant stem
b-growth of plants toward the light
c-migration of birds to search for food
d-behavioral adaptations
- 2-An animal to live and survive, needs
a-habitat only b-water only
c-habitat and food only d-water, food and habitat
- 3-All of the following are genetic factors that affect living organisms except
a-size of animal b-body color of animal
c-length of plant d-size of habitat
- 4-Brown spots on young rabbits' fur is related to
a-environmental factor b-genetic factors
c-climate factor d-abiotic factor
- 5-All of the following are biotic factors in an ecosystem, except which is abiotic factor.....
a-insect b-grass c-light d-living organism
- 6-Palm tree and emperor penguin are
a-abiotic factors present in the same habitat
b-abiotic factors present in different habitats
c-biotic factors live in the same habitat
d-biotic factors live in different habitats
- 7-Photosynthesis process is affected by some environmental factors such as
a-availability of water only b-availability of light only
c-availability of water and light d-the length of the plant
- 8-Poison dart frog lives in environment
a-arctic b-Antarctic c-desert d-tropical rain forest
- 9-Bad habits in human lifestyle include
a-eating healthy food b-doing exercises
c-drinking more soda d-avoid smoking
- 10-The Red Sea in Egypt includes all of the following environments, except environment.
a-marine b-mountain c-rainforest d-coastal

- 11-Minerals are the building blocks of
a-plants b-animals c-rocks d-humans
- 12-The soil that consist of large particles of sand is known as soil.
a-sand b-silt c-clay d-fertile
- 13-The clay soil is characterized by
a-yellow color b-gray color
c- black color d-blue color
- 14-..... and are from the inorganic components of the soil.
a-Air - plants b-Water - animals
c-Plants - animals d-Air - water
- 15-..... is from the invasive species that are found in the Red Sea.
a-Emperor penguin b-Poison dart frog
c-Lionfish d- Lizard
- 16-From the components that are not found in the soil
a-living organisms b-minerals
c-water and air d-sunlight
- 17-The color of sand soil is
a-yellow b-grey c-black d-red
- 18-An area between buildings contains grasses, insects and weeds represents
a-a large ecosystem b-a small ecosystem
c-structural characteristics d-Physical characteristics
- 19-The soil provides the plant with all the following, except
a-water b-air c- nutrients d-sunlight
- 20-Dorcas gazelle lives in
a-tropical area b-desert area
c-north pole d-south pole
- 21-All the following are inherited traits in human, except
a-eye color b-nose shape c-fur color d-ear shape
- 22-The genetic factors transfer from
a-living organism to nonliving thing b-nonliving thing to living organism
c-parents to their offspring d-offspring to their parents
- 23-The body structure of polar bear that allows it to live in extremely cold regions is considered
a-a behavioral adaptation b-a reproductive way
c-a structural adaptation d-an environmental change



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24-Behavioral adaptation include

a-a living organism does not respond to environmental factors.

b-African penguin's adaptation to higher temperature.

c-changes that occur in a living organism throughout all its life.

d-migration of geese to warmer regions

25-The baby rabbit resemble their parents as a result of

a-behavioral adaptations they have

b-genes transferring from parents to offspring

c-structures that allow their running ability

d-their behaviors that can be observed

26-The reason for the appearance of the characteristics of Dorcas gazelle (body structure) offspring is

a-the brain

b-the genes

c-the abiotic factors

d-environmental factors

27-What adaptation does not protect a plant from being eaten by herbivores?

a-Leaves of a plant with small sharp spines.

b-Leaves of a plant have a very bitter taste.

c-Poisonous plant leaves.

d-Plant leaves store large amounts of water.

28-What environmental factor is most likely to lead to decreasing of the number of fungi in humid environmental conditions?

a-high temperature

b-reduced amount of precipitation

c-the few numbers of days in which the sun shines during the month.

d-Fewer herbivores in a region.

29-The two processes related to disintegration of rocks and minerals that make up soil are

a-evaporation and weathering

b-erosion and condensation

c-deposition and evaporation

d-weathering and erosion

30-The arrangement of soil types according to the size of soil particles from largest to smallest is

a-sand, silt, clay

b-silt, sand ,clay

c-clay, sand, silt

d-sand, clay, silt



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-Put true or false:

- 1-Farmers may have to reuse water to deal with the problem of water shortage, especially in desert lands. ()
- 2-The more the ability of animal to adapt to the environment, the more the chance to survive. ()
- 3-Flowering plants are usually shorter than herbs. ()
- 4-Small animals are completely different from their parents. ()
- 5-Ecosystem include nonliving things only. ()
- 6-Antarctic is a cold desert biome. ()
- 7-The light is one of the abiotic factors, which affects the plant's growth. ()
- 8-Abiotic factors affect the growth and the adaptation of biotic factors. ()
- 9-All Birman cats have white, very short and silky hair. ()
- 10-Availability of water is a genetic factor that affects the growth of trees and shrubs in an ecosystem. ()
- 11-The amount of light affects the growth of plants. ()
- 12-If you examine a sample of soil, you will see only one type of ingredients in it. ()
- 13-Soil is the home of some living organisms. ()
- 14-Humus is a material that helps the plants to grow. ()
- 15-Sand soil has a black color. ()
- 16-Soil is important for animals only. ()
- 17-There are spaces between the particles of the soil. ()
- 18-Thorns on a plant stem, is an example of structural adaptation. ()
- 19-Your health will be positively affected, if you drink unclean water. ()
- 20-Water flows through sand soil faster than in clay soil. ()
- 21-Ecosystem contains biotic and abiotic factors. ()
- 22-Genes carry inherited traits from parents to their offspring. ()
- 23-Acacia trees and palms are adapted to live in desert environment. ()
- 24-Some animals migrate from one place to another seasonally. ()
- 25-The size of sand soil particles is smaller than that of silt and clay particles. ()
- 26-Chrysanthemum plant can produce flower when the nights are longer than days. ()
- 27-There is no sphynx cat has long hair like Birman cat. ()
- 28-Bog ecosystem has very hot temperature. ()
- 29-Birds migrate to areas that have no food or water. ()
- 30-It is easy for animals to live in the desert environment. ()

31-Emperor penguin and African penguin live in the same homeland. ()

32-All living organisms depend on soil to get their needs. ()

-Complete the following:

1-Transferring of falcons and steppe eagles to Egypt in winter, is known as

2-The place where animals adapted and live, is known as

3-The growth and survival of living organisms are affected by factors and factors.

4-The plants cannot grow in the presence of air and water, while which considered as one of the is absent.

5-The duration of light and its affect the plant's growth.

6-Chrysanthemum plant which considered as one of the can produce when the days are shorter than the nights.

7-The emperor penguin is affected by factors differ from the affect that African penguin due to the difference of their locations.

8-Poison dart frog and arctic fox are affected by different environmental factors, because they live in two different

9-The response of plant's growth to the amount of light, means a response of factor to abiotic factor.

10-Decomposers decompose dead organisms into components rich in nutrient materials called that help plants to grow.

11-Large carnivores' animals such as and cheetahs depend on herbivores as that live in grassland ecosystems.

12-Frogs and are from the most common animals that live in bog ecosystem.

13-Emperor penguin has a thick and its skin covered with dense to keep its body warm.

14-Availability of water and light affect the amount of that represents the food of some animals.

15-Soil is composed of many inorganic ingredients as,, rocks and minerals.

16-Both of factors and factors affect the growth of living organisms.

- 17-Thick fur is an example of adaptation for animal that live in climate.
- 18-Both of the sea and the river are two important stopovers in Egypt for birds.
- 19-Bird migration helps them to search for different sources and suitable to live in in.
- 20-Egypt is an important stopover for birds as it has winter climate.
- 21-The body size of the animal and length of the plant are two factors that affect their growth.
- 22-Living organisms get the factors from their parents.
- 23-Light, air and water are needs for plants to grow.
- 24-The soil is the shelter for many living organisms, such as,, and fungi.
- 25-The processes that play an important role in soil formation are, and deposition.
- 26-Organic materials in the soil includes the remains of dead and
- 27-According the size of particles in the soil, are the biggest particles, while are the smallest particles.
- 28-Silt soil has mount of pore spaces between its particles, while sand soil has amount of pore spaces.
- 29-Silt soil is more because it retains medium amount of
- 30-Humid areas retains large amount of water which cause washing down the of the soil.
- 31-The layer in soil of dry areas doesn't allow plants to grow in this areas.
- 32- In savannah, large and fast carnivores feed on
- 33-Types of plants in the soil affect the and conditions of the ecosystem.
- 34-Sand soil is and loose soil, so large trees can't grow in it.



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-Write the scientific term of each of the following:

- 1-They are responsible for determining the body feature, and present in the cell nucleus. (.....)
- 2-A process through which the living organism be able to live and survive in its environment. (.....)
- 3-It contains biotic factors and abiotic factors that interact with each other. (.....)
- 4-They are external factors that affect our health and we might not able to control them. (.....)
- 5-A type of soil that contains large amount of clay particles and has dark color.
- 6-The place in which living organisms live. (.....)
- 7-A scientist who studies the Earth's atmosphere and forecasts the weather. (.....)
- 8-It is a change in the body structure of living organisms that helps them to survive. (.....)
- 9-Living organisms help in recycling nutrients from dead plants and animals back to the soil. (.....)
- 10-An important stopover in Egypt of migratory birds, that includes marine, coastal and mountain environment. (.....)
- 11-The loose layer that covers Earth's surface. (.....)
- 12-It is a change in the behavior or acts of a living organism to help it survive. (.....)
- 13-The distance between the particles of the soil. (.....)
- 14-It is a type of behavioral adaptation in which animals move in a certain season from one place to another. (.....)
- 15-An important stopover in Egypt for migratory birds that includes marine, coastal and mountain environment. (.....)
- 16-Behaviors that living organisms get due to the effect of environmental factors. (.....)
- 17-Behaviors that living organisms inherit due to the effect of genetic factors.
- 18-The factors that include living organisms in ecosystem. (.....)
- 19-It is a desert biome that has cold climate all the year. (.....)
- 20-Traits that play an important role in determining the shape and structure of organisms. (.....)

- 21-They are external factors that affect our health, and we might not able to control them. (.....)
- 22-It is an organic material that is rich in nutrients produced from decomposition of dead organisms. (.....)
- 23-The soil that has large sized particles and its color is yellow. (.....)
- 24-The black soil that can retain large amount of water. (.....)
- 25-A type of soil that retains medium amount of water and has medium pore spaces between its particles. (.....)
- 26-The distances between particles in the soil. (.....)
- 27-Grassland ecosystem that contain dry sand soil and are common in central Africa. (.....)
- 28-Soil in grass land habitat. (.....)
- 29-Soil in bogs. (.....)

-Give a reason for the following:

1-Small Dorcas gazelle is similar to its parents.

.....

.....

.....

2-Falcons and eagles migrate to Egypt in winter.

.....

.....

.....

3-Birds migrate from one place to another place.

.....

.....

.....

4-African penguin has a circle of skin that doesn't have any feather around each of its eyes.

.....

.....

.....

5-Most of desert plants have short extended most near the Earth's surfaces.

.....

.....

.....

6-Some plants in deserts produce seeds that can live for a long time.

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7-Poison dart frog has colorful poisonous skin.

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8-Lizard body is covered with sandy-colored scales.

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.....

9-Some plants which live in desert environment have long roots.

.....

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.....

10-A Birman kitten has a long and silky hair.

.....

.....

.....

11-Sphynx cats doesn't have long hair.

.....

.....

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12-Your lifestyle choices affect your health.

.....

.....

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13-Decomposers have an important role in the formation of soil.

.....

.....

.....

14-There are many types of soil.

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15-Soil is very important for plants.

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16-Water can flow very fast through sand soil.

.....

.....

.....

17-The soil that retains medium amount of water is more fertile.

.....

.....

.....

18-Clay soil can retain more amount of water.

.....

.....

.....

19-The soil in a bog ecosystem is wet most of time.

.....

.....

.....

20-Large trees can't grow in savannas grassland ecosystem.

.....

.....

.....

21-Composition of soil differs from one place to another on Earth's surface.

.....

.....

.....

22-Importance of humus for soil and plants.

.....

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.....



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-What happens if:

1-The environment conditions change in the homeland in which some migratory birds live.

.....

.....

.....

2-The genetic factor of hairless body trait are transferred from sphynx cat parents to their off springs.

.....

.....

.....

3-The inherited traits are transferred from desert plants to another thorough generations.

.....

.....

.....

What happens to:

1-The living organisms in an ecosystem, if water and light are not available.

.....

.....

.....

2-The plants in an ecosystem, if they receive too much intense light.

.....

.....

.....

3-Two similar plants, if they exposed to same intensity and duration of light.

.....

.....

.....

4-The soil if it does not contain any decomposer organisms.

.....

.....

.....

5-The soil if the temperature in the environment increases.

.....

.....

.....

6-The soil if it has large amount of pores spaces between its particles.

.....

.....

.....

7-The soil that holds medium amount of water.

.....

.....

.....

8-The soil when there is much water in a humid area.

.....

.....

.....

9-The plants in an ecosystem, if they receive too intense light.

.....

.....

.....

10-Arctic fox if it has a thin fur instead of a thick fur.

.....

.....

.....

11-Arctic fox if it has black fur instead of a white fur.

.....

.....

.....

12-African penguin if it has dense feathers around each of its eyes.

.....

.....

.....

13-The plant if the soil is unhealthy

.....

.....

.....

14-The rock if they are affected by weathering and erosion.

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15-The soil fertility if the soil hold medium amount of water.

.....

.....

.....

16-The soil when there is much water in a humid area.

.....

.....

.....

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March Revision



-Choose the correct answer:

1-Thick fur of animals which live in cold areas, is an adaptation that looks like the

a-presence of thorns on a plant stem

b-growth of plants toward the light

c-migration of birds to search for food

d-behavioral adaptations

2-An animal to live and survive, needs

a-habitat only

b-water only

c-habitat and food only

d-water, food and habitat

3-All of the following are genetic factors that affect living organisms except

a-size of animal

b-body color of animal

c-length of plant

d-size of habitat

4-Brown spots on young rabbits' fur is related to

a-environmental factor

b-genetic factors

c-climate factor

d-abiotic factor

5-All of the following are biotic factors in an ecosystem, except which is abiotic factor.....

a-insect

b-grass

c-light

d-living organism

6-Palm tree and emperor penguin are

a-abiotic factors present in the same habitat

b-abiotic factors present in different habitats

c-biotic factors live in the same habitat

d-biotic factors live in different habitats

7-Photosynthesis process is affected by some environmental factors such as

a-availability of water only

b- availability of light only

c- availability of water and light

d- the length of the plant

8-Poison dart frog lives in environment

a-arctic

b- Antarctic

c- desert

d- tropical rain forest

9-Bad habits in human lifestyle include

a-eating healthy food

b- doing exercises

c-drinking more soda

d-avoid smoking

10-The Red Sea in Egypt includes all of the following environments, except environment.

a-marine

b-mountain

c-rainforest

d-coastal



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11-Minerals

a-plants

12-The soil that consist of large particles of sand is known as soil.

a-sand

b-silt

c-clay

d-fertile

13-The clay soil is characterized by

a-yellow color

b-gray color

c- black color

d-blue color

14-..... and are from the inorganic components of the soil.

a-Air - plants

b-Water - animals

c-Plants - animals

d-Air - water

15-..... is from the invasive species that are found in the Red Sea.

a-Emperor penguin

b-Poison dart frog

c-Lionfish

d- Lizard

16-From the components that are not found in the soil

a-living organisms

b-minerals

c-water and air

d-sunlight

17-The color of sand soil is

a-yellow

b-grey

c-black

d-red

18-An area between buildings contains grasses, insects and weeds represents

a-a large ecosystem

b-a small ecosystem

c-structural characteristics

d-Physical characteristics

19-The soil provides the plant with all the following, except

a-water

b-air

c- nutrients

d-sunlight

20-Dorcas gazelle lives in

a-tropical area

b-desert area

c-north pole

d-south pole

21-All the following are inherited traits in human, except

a-eye color

b-nose shape

c-fur color

d-ear shape

22-The ge

a-living or

c-parents



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g organism
nts

23-The body structure of polar bear that allows it to live in extremely cold regions is considered

a-a behavioral adaptation

b-a reproductive way

c-a structural adaptation

d-an environmental change

24-Behavioral adaptation include

a-a living organism does not respond to environmental factors.

b-African penguin's adaptation to higher temperature.

c-changes that occur in a living organism throughout all its life.

d-migration of geese to warmer regions

25-The baby rabbit resemble their parents as a result of

a-behavioral adaptations they have

b-genes transferring from parents to offspring

c-structures that allow their running ability

d-their behaviors that can be observed

26-The reason for the appearance of the characteristics of Dorcas gazelle (body structure) offspring is

a-the brain

b-the genes

c-the abiotic factors

d-environmental factors

27-What adaptation does not protect a plant from being eaten by herbivores?

a-Leaves of a plant with small sharp spines.

b-Leaves of a plant have a very bitter taste.

c-Poisonous plant leaves.

d-Plant leaves store large amounts of water.

28-What environmental factor is most likely to lead to decreasing of the number of fungi in humid environmental conditions?

a-high temperature

b-reduced amount of precipitation

c-the few numbers of days in which the sun shines during the month.

d-Fewer herbivores in a region.

29-The two processes related to disintegration of rocks and minerals that make up soil are

a-evaporation and weathering

b-erosion and condensation

c-deposition and evaporation

d-weathering and erosion

30-The arrangement of soil types according to the size of soil particles from largest to smallest is

a-sand, silt, clay

b-silt, sand ,clay

c-clay, sand, silt

d-sand, clay, silt

-Put true or false:

- 1-Farmers may have to reuse water to deal with the problem of water shortage, especially in desert lands. (✓)
- 2-The more the ability of animal to adapt to the environment, the more the chance to survive. (✓)
- 3-Flowering plants are usually shorter than herbs. (X)
- 4-Small animals are completely different from their parents. (X)
- 5-Ecosystem include nonliving things only. (X)
- 6-Antarctic is a cold desert biome. (✓)
- 7-The light is one of the abiotic factors, which affects the plant's growth. (✓)
- 8-Abiotic factors affect the growth and the adaptation of biotic factors. (✓)
- 9-All Birman cats have white, very short and silky hair. (X)
- 10-Availability of water is a genetic factor that affects the growth of trees and shrubs in an ecosystem. (X)
- 11-The amount of light affects the growth of plants. (✓)
- 12-If you examine a sample of soil, you will see only one type of ingredients in it. (X)
- 13-Soil is the home of some living organisms. (✓)
- 14-Humus is a material that helps the plants to grow. (✓)
- 15-Sand soil has a black color. (X)
- 16-Soil is important for animals only. (X)
- 17-There are spaces between the particles of the soil. (✓)
- 18-Thorns on a plant stem, is an example of structural adaptation. (✓)
- 19-Your health will be positively affected, if you drink unclean water. (X)
- 20-Water flows through sand soil faster than in clay soil. (✓)
- 21-Ecosystem contains biotic and abiotic factors. (✓)
- 22-Genes carry inherited traits from parents to their offspring. (✓)
- 23-Acacia trees and palms are adapted to live in desert environment. (✓)
- 24-Some animals migrate from one place to another seasonally. (✓)
- 25-The size of sand soil particles is smaller than that of silt and clay particles. (X)
- 26-Chrysanthemum plant can produce flower when the nights are longer than days. (✓)
- 27-There is no sphynx cat has long hair like Birman cat. (✓)
- 28-Bog ecosystem has very hot temperature. (X)
- 29-Birds migrate to areas that have no food or water. (X)
- 30-It is easy for animals to live in the desert environment. (X)
- 31-Emperor penguin and African penguin live in the same homeland. (X)
- 32-All living organisms depend on soil to get their needs. (✓)

-Complete the following:

- 1-Transferring of falcons and steppe eagles to Egypt in winter, is known as **migration**.
- 2-The place where animals adapted and live, is known as **habitat**
- 3-The growth and survival of living organisms are affected by **genetic** factors and **environmental** factors.
- 4-The plants cannot grow in the presence of air and water, while **light** which considered as one of the **abiotic factors** is absent.
- 5-The duration of light and its **intensity** affect the plant's growth.
- 6-Chrysanthemum plant which considered as one of the **biotic factors** can produce **flowers** when the days are shorter than the nights.
- 7-The emperor penguin is affected by **environmental** factors differ from the affect that African penguin due to the difference of their locations.
- 8-Poison dart frog and arctic fox are affected by different environmental factors, because they live in two different **environments**
- 9-The response of plant's growth to the amount of light, means a response of **biotic** factor to abiotic factor.
- 10-Decomposers decompose dead organisms into components rich in nutrient materials called **humus** that help plants to grow.
- 11-Large carnivores' animals such as **lions** and cheetahs depend on herbivores as **gazelle** that live in grassland ecosystems.
- 12-Frogs and **mosquitos** are from the most common animals that live in bog ecosystem.
- 13-Emperor penguin has a thick **blubber** and its skin covered with dense **feathers** to keep its body warm.
- 14-Availability of water and light affect the amount of **plants** that represents the food of some animals.
- 15-Soil is composed of many inorganic ingredients as **water, air,** rocks and minerals.
- 16-Both of **genetic** factors and **environmental** factors affect the growth of living organisms.
- 17-Thick fur is an example of **structural** adaptation for animal that live in **cold** climate.
- 18-Both of the for **migratory** birds in Egypt
- 19-Bird migrat **habitat** to live and suitable
- 20-Egypt is an important stopover for **migratory** birds as it has **moderate** winter climate.



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- 21-The body size of the animal and length of the plant are two **genetic** factors that affect their growth.
- 22-Living organisms get the **genetic** factors from their parents.
- 23-Light, air and water are **basic** needs for plants to grow.
- 24-The soil is the shelter for many living organisms, such as **worms, insects, bacteria** and fungi.
- 25-The processes that play an important role in soil formation are **weathering, erosion** and deposition.
- 26-Organic materials in the soil includes the remains of dead **plants** and **animals**
- 27-According to the size of particles in the soil, **sand** are the biggest particles, while **clay** are the smallest particles.
- 28-Silt soil has **moderate** amount of pore spaces between its particles, while sand soil has **large** amount of pore spaces.
- 29-Silt soil is more **fertile** because it retains medium amount of **water**
- 30-Humid areas retain large amount of water which cause washing down the **nutrients** of the soil.
- 31-The **dry clay** layer in soil of dry areas doesn't allow plants to grow in this areas.
- 32- In savannah, large and fast carnivores feed on **gazelles**
- 33-Types of plants in the soil affect the **temperature** and **weather** conditions of the ecosystem.
- 34-Sand soil is **dry** and loose soil, so large trees can't grow in it.

-Write the scientific term of each of the following:

- 1-They are responsible for determining the body feature, and present in the cell nucleus. (**Genes**)
- 2-A process through which the living organism be able to live and survive in its environment. (**Adaptation**)
- 3-It contains biotic factors and abiotic factors that interact with each other. (**Ecosystem**)
- 4-They are external factors that affect our health and we might not be able to control them. (**Environmental factors**)
- 5-A type of soil that contains large amount of clay particles and has dark color. (**Clay soil**)
- 6-The place in which living organisms live. (**habitat**)
- 7-A scientist who studies the Earth's atmosphere and forecasts the weather. (**meteorologist**)

- 8-It is a change in the body structure of living organisms that helps them to survive. **(structural adaptation)**
- 9-Living organisms help in recycling nutrients from dead plants and animals back to the soil. **(decomposers)**
- 10-An important stopover in Egypt of migratory birds, that includes marine, coastal and mountain environment. **(The Red Sea)**
- 11-The loose layer that covers Earth's surface. **(Soil)**
- 12-It is a change in the behavior or acts of a living organism to help it survive. **(behavioral adaptation)**
- 13-The distance between the particles of the soil. **(pore spaces)**
- 14-It is a type of behavioral adaptation in which animals move in a certain season from one place to another. **(Migration)**
- 15-An important stopover in Egypt for migratory birds that includes marine, coastal and mountain environment. **(Red sea)**
- 16-Behaviors that living organisms get due to the effect of environmental factors. **(Acquired traits)**
- 17-Behaviors that living organisms inherit due to the effect of genetic factors. **(Inherited traits)**
- 18-The factors that include living organisms in ecosystem. **(Biotic factors)**
- 19-It is a desert biome that has cold climate all the year. **(Antarctica)**
- 20-Traits that play an important role in determining the shape and structure of organisms. **(Inherited traits)**
- 21-They are external factors that affect our health, and we might not be able to control them. **(Environmental Factors)**
- 22-It is an organic material that is rich in nutrients produced from decomposition of dead organisms. **(Humus)**
- 23-The soil that has large sized particles and its color is yellow. **(Sand)**
- 24-The black soil that can retain large amount of water. **(Clay soil)**
- 25-A type of soil that retains medium amount of water and has medium pore spaces between its particles. **(Silt soil)**
- 26-The distances between particles in the soil. **(Pore spaces)**
- 27-Grassland ecosystem that contain dry sand soil and are common in central Africa. **(Savannah)**
- 28-Soil in grass land habitat. **(Dry sand soil)**
- 29-Soil in bogs. **(Soil rich in clay)**

-Give a reason for the following:

1-Small Dorcas gazelle is similar to its parents.

Because they get some genetic factors from their parents.

2-Falcons and eagles migrate to Egypt in winter.

Because Egypt in winter has a moderate climate conditions.

3-Birds migrate from one place to another place.

To search for the best conditions that help them reproduce and preserve their species, searching for new habitat and searching for new food resources.

4-African penguin has a circle of skin that doesn't have any feather around each of its eyes.

To help its body cool fast in hot climate.

5-Most of desert plants have short extended most near the Earth's surfaces.

To absorb any available water and to catch the smallest drops of dew

6-Some plants in deserts produce seeds that can live for a long time.

Because in deserts there are shortage of rain fall for a long time.

7-Poison dart frog has colorful poisonous skin.

To protect itself from predators.

8-Lizard body is covered with sandy-colored scales.

To hide among rocks in deserts.

9-Some plants which live in desert environment have long roots.

To get the deep groundwater.

10-A Birman kitten has a long and silky hair.

Because it inherits this trait from its parents.

11-Sphynx cats doesn't have long hair.

Because it doesn't have the genetic factor for long hair.

12-Your lifestyle choices affect your health.

Because it depends on your behavior which may be good habits or bad habits.

13-Decomposers have an important role in the formation of soil.

Because decomposers recycle the remains of dead plants and animals into chemical nutrients such as carbon, nitrogen and oxygen which are released in the soil.

14-There are many types of soil.

Due to the different amounts of organic and inorganic components that form them.

15-Soil is very important for plants.

Because soil provides the plant with its basic needs for growth as it contains air, water and nutrients.

16-Water can flow very fast through sand soil.

Because it has large amount of pore spaces between its particles.



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17-The soil that retains medium amount of water is more fertile.

Because it keeps its organic materials and this helps in the plant growth.

18-Clay soil can retain more amount of water.

Because it has small amount of pore spaces between its particles.

19-The soil in a bog ecosystem is wet most of time.

Because it is rich with clay particles that retain much water very well.

20-Large trees can't grow in savannas grassland ecosystem.

Because its soil is sand soil which is dry and loose that drains water quickly.

21-Composition of soil differs from one place to another on Earth's surface.

Due to the effect of climate and types of rocks found in this soil.

22-Importance of humus for soil and plants.

Because the humus increase the soil fertility and helps plants to grow.

-What happens if:

1-The environment conditions change in the homeland in which some migratory birds live.

They will migrate to another suitable habitat.

2-The genetic factor of hairless body trait are transferred from sphynx cat parents to their off springs.

The trait of hairless body appears on the offspring.

3-The inherited traits are transferred from desert plants to another through generations.

The desert plants are more adapted to survive in extreme desert conditions.

What happens to:

1-The living organisms in an ecosystem, if water and light are not available.

Living organisms can't survive and will die.

2-The plants in an ecosystem, if they receive too much intense light.

The too intense light may damage the plant's parts and cause their drying or burning.

3-Two similar plants, if they exposed to same intensity and duration of light.

The two plants will grow with the same rate.

4-The soil if it does not contain any decomposer organisms.

The soil will lose the nutrients that are found in dead plants and animals and the soil will not be fertile.

5-The soil if the temperature in the environment increases.

The soil will dry and may lose its nutrients.

6-The soil if it has large amount of pores spaces between its particles.

It allows water to flow fast through it.

7-The soil that holds medium amount of water.

The soil keeps its organic materials so it becomes more fertile.

8-The soil when there is much water in a humid area.

The soil becomes waterlogged soil and contains very little amount of air and this doesn't help roots of plants to grow in it.

19-The plants in an ecosystem, if they receive too intense light.

The too intense light may damage the plant's parts and cause their dying or burning.

20-Arctic fox if it has a thin fur instead of a thick fur.

It cannot keep its body warm at low temperature.

21-Arctic fox if it has black fur instead of a white fur.

It can't hide in snow.

22-African penguin if it has dense feathers around each of its eyes.

Its body does not cool fast at high temperature.

23-The plant if the soil is unhealthy

The environment will change leading to death of the plant that grow in this environment.

24-The rock if they are affected by weathering and erosion.

The rocks are broken down into small pieces such as particles of sand, silt and clay.

25-The soil fertility if the soil holds medium amount of water.

The soil keeps its organic nutrients and become more fertile.

26-The soil when there is much water in a humid area.

The soil becomes waterlogged soil and contains very little amount of air and this does not help roots of plants to grow in it.



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حمل الآن

مجاناً وحصرياً

المراجعة رقم (7)

اختبار شهر ابريل





April Revision

Mr. Ahmed ElBasha

★ **(1) Write the scientific term:**

- 1) A process through which the living organism be able to live and survive in its environment. (.....)
- 2) It is a type of behavioral adaptation in which animals move in a certain season from one place to another. (.....)
- 3) It is a change in the behaviors or acts of a living organism to help it survive. (.....)
- 4) It is a change in the body structure of living organisms that helps them to survive. (.....)
- 5) It contains biotic factors and abiotic factors that interact with each other. (.....)
- 6) It is the factor that controls which trait get inherited from parents to their offspring. (.....)
- 7) The loose layer that covers Earth's surface. (.....)
- 8) The building blocks of rocks. (.....)
- 9) The process that breaks down rock into small particles. (.....)
- 10) It is an organic material that is rich in nutrients produced from decomposition of dead organisms. (.....)
- 11) The spaces between soil particles. (.....)
- 12) The dark (black) soil that can retain large amount of water. (.....)
- 13) The distances between the particles of the soil. (.....)

***(2) Choose the right answer:**

1. Dorcas gazelle lives in

- a. tropical area. b. desert area. c. north pole. d. south pole.

2. The Red Sea in Egypt includes all of the following environments, except environment.

- a. marine b. mountain c. rain forest d. coastal

3. Poison dart frog lives in the environment.

- a. arctic b. Antarctic c. desert d. tropical rain forest

4. All the following are biotic factors, except

- a. animals. b. insects. c. precipitation. d. grasses.

5. All the following are inherited traits in humans, except

- a. eye color. b. nose shape. c. fur color. d. ear shape.

6. Genes are tiny structures that found in

- a. the cell nucleus. b. the cell membrane.
c. the cell wall. d. mitochondria.

7. is the loose layer that covers Earth's crust.

- a. Humus b. Water c. Soil d. Air

8. The two main processes which help in the soil formation are and

- a. erosion - evaporation. b. weathering - condensation.
c. erosion - weathering. d. melting - condensation.

9. The material rich in nutrients and increases the soil fertility is known as

- a. decomposers. b. humus. c. sand. d. water.

10. The color of sand soil is

- a. yellow. b. gray. c. black. d. red.

11. soil holds water well so, it becomes most of the time.

- a. Sand - wet b. Clay - wet c. Clay - dry d. Silt - dry

12. Bogs contain soil that retains amount of water.

- a. silt - medium b. sand - large c. clay - large d. clay - medium

13. and are the most common animals that live in bogs.

- a. Mosquitos - frogs b. Lions - tigers
c. Gazelles - zebra d. Lions - frogs

14..... and are from the ways of soil restoration.

- a. Adding nutrients to the soil - deforestation
- b. Overuse of pesticides - water pollution
- c. Overgrazing - planting different types of crops
- d. Adding nutrients to the soil - planting different types of crops

15.Habitat destruction could happen due to

- a. natural changes only.
- b. human activities only.
- c. natural changes and human activities.
- d. overpopulation and increasing the green areas.

16..... is from the invasive species that are found in the Red Sea.

- a. Emperor penguin
- b. Poison dart frog
- c. Lionfish
- d. Lizard

17.From the reasons that increase water pollution is

- a. treatment of sewage and industrial water.
- b. getting rid of trash in correct ways.
- c. increasing the industries that use water.
- d. using soil fences and sedimentation ponds.

18.Traditional bricks and concrete must be burned at temperature and produce amount of pollution.

- a. high - small
- b. high - large
- c. low - large
- d. low - small

✱(3) Put (√) or (X):

- | | |
|--|--------|
| 1. Thorns on a plant stem, is an example of structural adaptation. | () |
| 2. Some animals migrate from one place to another seasonally. | () |
| 3. Birds migrate to areas that have no food or water. | () |
| 4. Acacia trees and palms are adapted to live in desert environment. | () |
| 5. Ecosystems include living organisms only. | () |
| 6. Ecosystems contain biotic factors and abiotic factors. | () |
| 7. Abiotic factors of an ecosystem can eat, breathe and grow. | () |
| 8. Biotic factors of an ecosystem include sunlight, air and water. | () |
| 9. Abiotic factors affect the growth and the adaptation of biotic factors. | () |
| 10.The amount of light affects the growth of plants. | () |
| 11.The intensity and duration of light affect the plant's growth. | () |
| 12.All types of deserts have heavy rainfall. | () |
| 13.All living organisms inherited traits from their parents. | () |
| 14.Inherited traits don't affect the structure of living organisms. | () |
| 15.Sphynx cat doesn't have any hair or have only very fine hair. | () |
| 16.There is no Sphynx cat has long hair like Birman cat. | () |
| 17.Genes carry inherited traits from parents to their offspring. | () |
| 18.All types of soil are similar in color and texture. | () |
| 19.The size of sand particles is smaller than sill and clay particles. | () |
| 20.The size of sand particles is smaller than that of silt particles. | () |
| 21.Water flows through sand soil faster than in clay soil. | () |
| 22.Soils differ in their color and their ability to hold water. | () |
| 23.Clay soil can retain large amount of water. | () |
| 24.To prevent water pollution, laws must be applied . | () |

✳(4) Complete the following:

1. Living organisms get the factors from their parents.
2. All living organisms inherited factors which transferred from parents to their offspring.
3. The type of cats that inherits its hairless body from its parents, is known as cats
4. The way of your earlobes hang and the length of your fingers are two traits controlled by that are found in the cell nucleus.
5. The building units of rocks are called
6. The processes that play an important role in the soil formation are erosion and
7. According to the size of particles in the soil are the biggest particles, while are the smallest particles.
8. During rainfall, the soil of humid areas retains amount of water.
9. Increasing the inclination of the land leads to the increase of process of the soil.
10. Overuses of and cause depletion of the soil.
11. In the Red Sea, Lionfish is considered as species that harm the native species.
12. Human activities cause the increase in gas percentage and lead to the increase in Earth's
13. Changing natural spaces as hills, prairies and valleys into factories led to
14. To reduce water pollution we must keep green areas, and treat and industrial water.

★(5) Give reasons for:

1. Falcons and eagles migrate to Egypt in winter.

.....

2. Birds migrate from one place to another place.

.....

3. Most of desert plants have short extended roots near the Earth's surface.

.....

4. Lizard body is covered with sandy-colored scales.

.....

5. Some plants that live in desert environment have long roots.

.....

6. Sphynx cat doesn't have long hair.

.....

7. Soil is very important for plants.

.....

8. Decomposers have an important role in the formation of soil.

.....

9. Importance of humus for soil and plants.

.....

10. Water can flow very fast through sand soil.

.....

11. Clay soil can retain more amount of water.

.....

12. Desertification process increases recently.

.....

13. We should keep green areas and reduce the amount of fertilizers.

.....

✱(6) What happens to ... ?

1. The living organisms in an ecosystem, if water and light are not available.

.....

2. The plants in an ecosystem, if they receive too intense light.

.....

3. Arctic fox, if it has a thin fur instead of a thick fur.

.....

4. Arctic fox, if it has a black fur instead of a white fur.

.....

5. African penguin, if it has dense feathers around each of its eyes.

.....

6. The soil if it does not contain any decomposer organisms.

.....

7. The soil fertility if the soil hold medium amount of water.

.....

8. The soil when fertile agricultural lands are converted into factories or pastures.

.....

☀(7) TRY TO ANSWER:

1. Choose from column (B) what suits it in column (A) :

A	B
1. Structural adaptation	a. is an example of structural adaptation.
2. Behavioral adaptation	b. like growth of plant toward light.
3. Bird migration	c. is an ecosystem.
4. Thorns on a plant stem	d. like thick fur of animals that live in cold areas.
	e. is an example of behavioral adaptation.

1.

2.

3.

4.

2. Cross out the odd word:

1. Lizards - Palms - Opuntia - Frog.

2. Human -Air - Plants -Animals.

3. Sunlight - Plants - Water - Soil.

3. Look at the following picture, then complete the following sentences using the words below:

(pollution - traditional bricks)

1. This building material is called

2. The process of making this building material can cause
that damage the environment.

Model Answer

★ (1) Write the scientific term:

1. Adaptation	4. Structural adaptation	7. Soil	11. Pore spaces
2. Bird migration	5. Ecosystem	8. Minerals	12. Clay soil
3. Behavioral adaptation	6. Genetic factors	9. Weathering	13. Pore spaces
		10. Humus	

★ (2) Choose the right answer:

1. B	4. C	7. C	10.A	13.A	16.C
2. C	5. C	8. C	11.B	14.D	17.C
3. D	6. A	9. B	12.C	15.C	18.B

★ (3) Put (√) or (X):

1. (√)	5. (X)	9. (√)	13. (√)	17. (√)	21. (√)
2. (√)	6. (√)	10. (√)	14. (X)	18. (X)	22. (√)
3. (X)	7. (X)	11. (√)	15. (√)	19. (X)	23. (√)
4. (√)	8. (X)	12. (X)	16. (√)	20. (X)	24. (√)

★ (6) Give reasons for:

- Because Egypt in winter has moderate climate conditions.
- To search for best conditions that help them reproduce and find food resources.
- To absorb any available water and catch the smallest drops of dew.
- To protect it from high temperatures of weather and hide among rocks in desert.
- To get the deep groundwater.
- Because it doesn't have the genetic factor for long hair.
- Because soil provides the plants with its basic needs for growth as it contains air, water and nutrients.
- Because decomposers recycle the remains of dead plants and animals into chemical nutrients such as carbon, nitrogen and oxygen which are released into soil.
- Because humus increases the soil fertility and helps plants to grow.
- Because it has large amount of pore spaces between its particles.
- Because it has small amount of pore spaces between its particles.
- Due to deforestation, drought and overgrazing.
- To reduce water pollution.

★ (7) What happens to ... ?

- Living organisms can't survive and will die.
- The too intense light may damage the plant's parts and cause their drying or burning.
- It can't keep its body warm at low temperatures.
- It can't hide in snow.
- Its body doesn't cool fast at high temperatures.
- The soil will lose the chemical nutrients that are found in dead plants and animals, so the soil will not be fertile.
- The soil keeps its organic materials, so it becomes more fertile.
- Soil depletion may happen.

★ (8) TRY TO ANSWER:

1. 1.d 2.b 3.e 4.a

- 2.
- Frog
 - Air
 - Plants

- 3.
- Traditional bricks
 - Pollution

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

